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EVALUATION OF THE 1980 ROUND OF POPULATION AND HOUSING CENSUSES IN AFRICA

C O N T E N T S

		Paragraph	Page
1.	Introduction	1-4	1
2.	United nations recommendations	5-7	2
3.	Census project requests	8-12	2-3
4.	Organization and administration of census programmes	13-27	3-7
5.	Census publicity and education programmes	28-33	7-8
6.	Census cartography	34-42	8-10
7.	Tabulation and publication programmes	43-49	10-12
8.	Topics investigated	50-56	12-14
9.	Enumeration procedures	57-63	14-15
10.	Quality control of enumeration	64-69	15-16
11.	Census coverage evaluation	70-77	16-18
12.	Data processing	78-89	18-20
13.	Use of sampling in censuses	90-99	20-21
14.	Analysis of data	100-104	21-23
15.	Dissemination of information	105-110	23-24
16.	Conclusions and recommendations	111	24-26

1. Introduction

1. It may be recalled that the African Census Programme (ACP), financed by UNFPA, was instituted in 1971 to assist some African countries to carry out their censuses in the 1970 round of census programmes. However the ACP was continued till 1977, and thus a number of countries which received assistance under the ACP, conducted their censuses during the 1980 round. The countries are: Burkina Faso (1975), Central African Republic (1975), Ivory Coast (1975), Madagascar (1975), Somalia (1975), Cameroon (1976), Mali (1976), Senegal (1976), Mauritania (1976/77), Niger (1977), Benin (1979), and Burundi (1979). In addition to these countries, 35 other African countries have undertaken censuses during the period 1975 to 1984. Thus the number of African countries which took part in the 1980 World Population and Housing Census Programme was 47. The remaining three countries are Chad, Nigeria and Sierra Leone. Of those three countries, Chad has never had a population census. UNFPA, however, fielded a population Basic Needs Assessment Mission in February 1985 and it is expected that plans for the first census would be initiated when circumstances permit. Nigeria, on the other hand conducted censuses in 1963 and 1973 but the results of the last census in 1973 were cancelled and there has not been any population census since then. A draft project request for the next census was prepared in November 1983 but up to the time of writing this paper no decision had been taken regarding plans for its implementation. Sierra Leone should have conducted its census in the 1980 round of censuses in 1984 but due to the late start of the census preparatory activities, the census enumeration date was postponed and it is expected to be conducted in December 1985.

2. It is also worth mentioning that for 19 of the 47 countries which took part in the 1980 round of censuses, it was their first modern population census. The countries in this category are: Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Djibouti, Equatorial Guinea, Ethiopia, Guinea, Guinea Bissau, Ivory Coast, Madagascar, Mali, Mauritania, Niger, Rwanda, Senegal, Somalia and Zaire.

3. Although it is recommended that a census be taken at least once in every ten years the interval between the last two censuses in many African countries was more than 10 years. This is also true of some of the censuses taken in earlier periods. The problems which have made it difficult to adhere strictly to decennial census programmes include: delays in geographic preparations, political disturbances, parliamentary/ presidential elections, general economic difficulties, etc..

4. An operation of the magnitude of a census can hardly be carried out without some problems. An evaluation of the 1980 round of African censuses is therefore useful since it would reveal the lessons from the past and thus assist in the improvement of data collection programmes.

2. United Nations Recommendations

5. Following the practice for the 1960 and 1970 World Census Programmes, the United Nations Statistical Commission adopted a set of recommendations for the 1980 census programme. The recommendations were developed over a number of years through consultations between United Nations Headquarters, the regional commissions and individual countries. Before the recommendations were finalized, they were discussed by the Expert Group on Global Recommendations for the 1980 Population and Housing Censuses which met at United Nations Headquarters from 16-24 January 1978.

6. The global recommendations are divided into three parts: operational aspects of population and housing censuses; topics and tabulations for population censuses; and topics and tabulations for housing censuses. In adopting the recommendations, the United Nations Economic and Social Council recommended, "inter alia, that Member States undertake to carry out population and housing censuses during the period 1975-84 and that they take into account international recommendations relating to population and housing censuses."

7. In addition to the global recommendations, there were regional recommendations. For the African region, the Working Group which met at ECA Headquarters, Addis Ababa from 10 to 14 July 1978, provided guidelines on programming and organization of censuses, budget, census cartography, publicity, concepts, definitions and classifications including topics to be investigated and tabulations to be prepared, enumeration procedures, census documents, census tests, use of sampling, recruitment and training of census personnel, data processing, coverage and content error evaluation, census data analysis, publication and dissemination of census results.

3. Census Project Requests

8. A number of the countries which conducted their censuses during the period under consideration initiated the census preparatory activities with a request for assistance by ECA or United Nations Headquarters in the preparation of a project request. Such project documents were usually submitted to UNFPA for financial support.

9. In a few instances, census project documents were prepared by the countries themselves but frequently such documents had to be revised with the assistance of United Nations regional or inter-regional advisers to conform with UNFPA policies and guidelines regarding project requests.

10. Project requests generally took six or more months to process and in some cases a further six or more months elapsed before the delivery of the external inputs particularly the fielding of international personnel. This clearly shows that project documents need to be prepared in good time to ensure that census programmes would be implemented on schedule.

A review of the censuses undertaken with UNFPA assistance during the 1980 round of censuses indicates that in many cases not only were project documents prepared late in relation to the expected date for initiation of census activities but also there was the tendency for countries to initiate preparatory activities only when the level of external assistance was known. In fact in some cases, the necessary preparations to ensure immediate effective use of the external inputs were not made, hence further delays in the implementation of project activities occurred even after the delivery of the inputs.

11. A related issue was the tendency for some census organizers in the African region to look on census project documents solely as instruments for requesting funds from external sources. Thus the use of the project document also as an implementing guide was often overlooked. The institutional framework, work plan and advance preparations and obligations indicated in project documents were therefore often ignored with the result that bottlenecks were experienced at various stages of a number of census programmes.

12. It has also been observed that in a number of instances adequate financial, material and manpower resources needed for the various phases of censuses were not made. For instance, provision for publication or other channel of disseminating the information was left for consideration at a later date. This was true also of plans and programmes of data evaluation and analysis. It may be recalled that at a seminar organized by ECA in 1973 it was stated that "there is a common tendency in some of the developing countries that after the first spurt of activities in connection with census taking there is a marked lag when it comes to processing of data. Computerisation has not eased the situation. Publication generally is so delayed that sometimes it is not completed even when the next census has arrived or passed. Attention then shifts to the new data rather than getting out what was produced earlier with so much efforts of men and materials." It seems that there has been only marginal improvement in the situation, if at all, since that statement was made.

4. Organization and administration of census programmes

13. A population census has been described as the single most extensive and complex statistical operation. Such an undertaking therefore requires careful planning. A number of activities have to be carried out at the planning stage. The initial principal preparatory activities cover the following: legal basis, institutional framework, census calendar and budget.

a) Legal basis

14. The legal basis for censuses carried out in the region was either the general statistics legislation or a specific census law. In some cases, in addition to the statistics or census law, special presidential order, proclamation or gazette notice was required. Often the order or notice had to indicate the census enumeration date as well as the topics to be investigated. Thus census preparatory activities needed to be initiated before the order or gazette notice could be published. However, in some countries without permanent census organization, it was the census order or proclamation which would indicate government commitment to the census and thus strengthen the hands of the census organizers in mobilizing the required resources both in terms of manpower and materials. In at least one country the census law even indicates the organizational structure for the census.

15. The restrictive provisions of census legislation as well as the delay in publishing the required census order or proclamation did have some adverse effect on implementation of census programmes. It is therefore suggested that census organizers need to review existing census legislation and appropriate steps taken timely to make the legislation flexible with respect to the census organizational structure and the topics to be investigated.

b) Institutional framework

16. In the area of institutional framework for censuses conducted in the region during the period under consideration, there has not been any significant change since the 1970 round of censuses. Some countries continued to set up ad hoc organizations for their censuses while others mobilized the staff of the statistics offices or strengthened the demographic statistics divisions within the statistics offices with the secondment of staff from other government agencies for the census activities.

17. High turnover of staff however continued to deplete the stock of expertise for census operations in some statistics offices. Some countries responded to the situation through reliance on international personnel provided under technical assistance programmes. In a number of cases the international personnel had to work without effective national counterparts. Thus the transfer of expertise to local personnel which should be part of such technical assistance was not realized. It is suggested that a more lasting solution to the problem regarding staff turnover should include a continuing training programme for staff at both professional and middle levels and improvement in working conditions of staff of statistics offices.

18. A review of organizational structure of census offices during the 1980 round of censuses in the region reveals also that in a number of countries without permanent census offices, effective division of labour was not maintained in the ad hoc census offices which were set up. This was the case even in some cases where it had been indicated in census project documents that the offices would comprise units responsible for specific activities such as cartography, statistical planning, field organization, publicity, data processing and administrative support including logistics. In some cases, even though some attempts were made to set up the various units, the staff assigned for census duties expecially in the area of administrative support services were not released early enough on full-time basis. In other cases, the head of the statistical office retained responsibility for the co-ordination of census activities, and thus the day-to-day administration of the census office in addition to his normal duties. Such situations resulted in certain cases in bottlenecks in the implementation of census programmes and delays in completion of some census preparatory activities.

19. there was also the tendency in some countries for the census to be considered as the exclusive responsibility of the statistics office and thus other government agencies were reluctant to release staff on secondment for census duties or provide some facilities such as loan of vehicles. In a few cases, the statistics office itself was not keen in obtaining staff on secondment from other agencies even though it did not have staff with all the expertise required for the various census operations.

20. It is suggested that with the relatively short history of censuses in the region, at least during the post-independence period, and the limited experience in censuses as well as limited facilities, censuses should be considered as national exercises requiring the collaboration of other government agencies. Such collaboration should not affect the leading role of the statistics or census office in the census programme since the final responsibility for the planning and execution of the census should rest with that office.

c) Census calendar and budget

21. Another activity which needs to be carried out at the early stages of census planning is the preparation of the census calendar or time-table. Such initial calendars were generally prepared for the censuses carried out during the 1980 round of African censuses. In the case of censuses conducted with external financial assistance the initial calendars were included in the project requests.

22. The initial census time-table, however, needs to be updated and made more detailed as the census programme progresses and more information becomes available. In general, only partial effort, if at all, was made to prepare detailed time-tables which would have served as a guide for measuring progress and controlling the numerous census operations. Thus, in a number of instances, census enumeration dates had to be postponed several times, while in others, crash programmes had to be instituted with the result that almost all activities of the statistical office were interrupted.

23. It must be emphasized that, since a census need to be considered not as an isolated exercise but rather as part of a continuing programme of data collection which includes other statistical enquiries, the non-adherence to a census time-table tends to disrupt other statistical programmes. If due consideration is not given to the full implications of a late revision in the census time-table on other statistical activities then bottlenecks would occur and the entire statistical services would become unduly burdened.

24. The preparation of the census budget also needs early attention in census planning. It is closely related to the census calendar since there need to be a financial estimate of the cost of each census operation. Information on census costs from a previous census provides an important basis for the preparation of the census budget. However, such information was not readily available in most of the African countries which conducted censuses during the period under consideration.

25. Problems relating to the timely release of funds after the census budget had been approved also had adverse effects on the implementation of census programmes. Some of the problems were due to inflexible financial regulations and the tendency for ministries responsible for finance to treat the census as routine administrative activity. Census organizers in a number of countries, however, found a way out of such situations by obtaining permission to open special census accounts with the national bank and the census budgetary allocations paid into it.

26. Other budgetary problems were due to the economic difficulties in many African countries during the period of the 1980 round of censuses. Unlike the situation during the 1970 round of censuses, it was difficult to obtain external assistance for payment of local costs during the 1980 round. The poor economic situation, however, made it difficult for many African countries to bear all local costs, in particular the payment of salaries and allowances of the large number of temporary field staff required for cartographic field work and census enumeration. Such financial problems delayed the delivery of government inputs, often at critical stages of census programmes.

27. It needs, however, to be emphasized that the indications seem to be that external assistance for censuses would continue to be on diminishing levels, hence African countries should depend more on their own resources for the implementation of census programmes. It is therefore essential that census programmes should be accorded appropriate recognition in government development programmes.

5. Census publicity and education programmes

28. Publicity now seems to have been recognized as essential for the success of a census, thus publicity campaigns were included in the preparatory activities of censuses conducted in the African region during the 1980 round. The intensity and timing of publicity programmes, however, varied among countries. Some publicity campaigns were started only a couple of months to the census enumeration while others could cover only parts of a country mainly urban areas.

29. The available mass media such as radio, television, mobile cinema vans, posters and the press were used in census publicity campaigns. Some countries used, in addition to the above mass media, traditional authorities, local headmen and public meetings to good effect in the rural areas. Committees were also set up at national and sub-national levels in some countries to plan the strategies for the census publicity.

30. The educational aspect of census publicity programme which should explain census concepts, reasons for various questions on the census questionnaire and also provide guidance on how questions should be answered, however, did not receive adequate attention. A typical example was in connection, with the concept of 'census night' or 'census day'. In a number of countries, the publicity campaign failed to educate the public on the distinction between the 'period of enumeration' and the "census reference night or day". Thus the public expected enumeration to be completed in one day and many people remained at home expecting enumerators to call on them. This caused some confusion and special announcements had to be made hurriedly to save the situation.

31. It was also indicated in a number of census project documents that school lesson notes would be prepared and used in schools so that school children could be used to spread the census message. This strategy did not seem to have been implemented in a satisfactory manner. In some countries, the lesson notes were not prepared and in others, the notes were ready for use just when the schools were breaking for vacation so their effect was very minimal, if at all. In at least one country, though the notes were prepared in good time, the distribution was not adequately supervised so a good number of them only ended at local education offices.

32. An aspect of census publicity programme which also did not receive adequate attention in some countries is its co-ordination with other census pre-enumeration activities. Attention was usually focused on the census enumeration without much regard given to other preparatory field activities such as cartographic field work and census tests. Some pre-enumeration field activities therefore ran into difficulties since publicity had not preceded them.

33. It must, however, be mentioned that since in many cases the census was the second or third in the post-independence period there was general co-operation from the public. In a number of countries, the problem which census organizers faced was rather how to obtain effective co-operation and collaboration of other government agencies. The need for specialized campaigns aimed at central authorities and regional and district officials in a census publicity programme therefore cannot be overemphasized.

6. Census cartography

34. On the whole, much effort was put into census cartographic preparations in many countries during the 1980 round of censuses. In some countries, advantage was taken of the cartographic field work to prepare a gazetteer of localities. In other countries the potential of census cartographic work was not fully exploited. In such countries, post-enumeration cartographic work including preparation of publication maps and presentation of census data with maps were ignored.

35. Despite the efforts made to prepare maps to assist in controlling census enumeration, a number of problems and weaknesses in census cartographic programmes were evident. Some of the problems were in connection with the following: preparation of cartographic work plan, training programmes for cartographic staff, production of Enumeration Area (EA) and Supervision Area (SA) maps, availability of suitable base maps, adequate map storage and inter-censal mapping capability.

36. One of the major weaknesses in census cartography during the 1980 round of censuses in many African countries was the relatively poor preparation of work plan for cartographic activities. It is essential that in the preparation of a cartographic work plan, due consideration is given to the need for personnel with proper skills in mapping, the equipment and supplies required for the various phases of the cartographic work and the costing of the entire programme. The work plan should also include the early determination of administrative and statistical areas for which census data will be reported and the coding schere which will ensure unique identification of each area. An examination of census

cartographic programmes of many countries which conducted censuses during the 1980 round, however, shows that plans of cartographic activities were not adequately prepared. Often the objectives of the cartographic work were ill-defined, or even when they were clearly stated, the plans which would ensure the realization of the objectives were hardly implemented as envisaged.

37. Some of the problems may also be attributed to cartographic training programmes which in many cases proved ineffective. In general, office cartographic staff received on-the-job training under an international resident expert/ECA regional adviser or at the local survey department's office or training school. Also, senior staff expected to be involved in census cartographic work were sometimes sent abroad for training. Inadequacies in some overseas training programmes, however, resulted in the application of suspect procedures and relatively poor management of census cartographic operations. The problem may be attributable to the type of emphasis given in the training programmes. Indeed, indications were that equitable balance between geography and demographic aspects on the one hand and surveying cartography on the other seems to have been seldom achieved in some of the training programmes. For example, courses in pure cartography at survey department training schools do not usually cover issues of census taking, and conversely, courses in census geography tend to concentrate on geographic aspects (such as coding) without adequate attention to map production. Census cartography, however, needs to be considered as a hybrid subject; thus it is necessary that the cartographic staff should receive instructions in both cartography and census geography in order to gain all-round comprehension.

38. In the case of cartographic field staff, inadequate preparations for their training and rushed training programmes did contribute to incorrect plotting of localities, poor delineation of EA boundaries, failure to complete cartographic field work and confusion over some definitions such as household, dwelling unit, compound, etc. The need to spend more time on field exercises during training and to make greater efforts in preparing instruction manuals and field forms cannot be over-emphasized. It was observed that in the cases where mainly verbal instructions were given to cartographic field staff much confusion resulted later on.

39. Another weakness in census cartographic programmes of some African countries during the period under review is related to the supply of maps to census enumeration field staff. In a number of countries, though great efforts were made to delineate EAs and produce the necessary maps, copies of EA maps were not given to enumerators. Distribution of the census maps was limited to supervisers and district census officers though it was recognized that EA maps help to ensure good coverage.

A variety of reasons were given for the practice. These include: insufficient time, shortage of printing paper and other printing materials, electricity breakdown, etc. In one country where an attempt was made to get around some of the problems, enumerators were given duplicate copies of original tracings made at the time of the field mapping instead of printed paper copies of the maps. The strategy proved adequate under the prevailing circumstances but, generally, it cannot be recommended since errors could be introduced during the hand-copying process.

40. Non-availability of suitable and up-to-date base maps also continued to be one of the major problems in census mapping in the African region during the period. The availability of country-wide coverage of maps of less than ten years old and at scales suitable for rural and urban use (e.g. 1:50,000 and 1:5,000) would have made it possible for even cartographic units with the most limited resources to produce reasonably adequate maps for census enumeration. In the circumstances, the ever increasing costs of air-photography, ground control and field completion as well as difficulties in maintaining equipment, obtaining chemicals and printing plates and retaining qualified and experienced staff in government service all contributed to the slow output of new base maps.

41. Other related problems are the failure of statistical/census offices to provide adequate facilities for map storage and to establish inter-censal mapping programme. Very often maps are not safely preserved from one census to another. If better storage had been arranged, maps from the 1970 round of censuses could have been more extensively used in the 1980 round; but too often, they had been lost or damaged in the inter-censal period. Further, many countries in the region failed to establish formal ongoing mapping programmes after the 1970 round and thus there was generally very low level of inter-censal cartographic capability in statistical/census offices, if any. In many cases, therefore, cartographic work for the censuses in the 1980 round had to begin from scratch and this undoubtedly contributed to the failure to complete census cartographic preparations satisfactorily in many countries.

42. Geographic preparation is an important element in any data collection especially population censuses. In a large number of countries, this important aspect was not given its due importance in the programme of activities and the effect has been that the quality of data and its use was reduced. For example, in some instances, the validity of results from post-enumeration surveys was vitiated and could not be used because of poor delineation of enumeration areas.

7. Tabulation and publication programmes

43. The determination of census objectives and the preparation of a programme of basic analysis of the census data should be carried out at the early stages of census planning. The objectives need to be expressed in the form

of a tabulation programme and their formats and it is advisable that consultations are held with major data users before they are finalized. It is also essential that both the preparation of the programme of basic census analysis and the tabulation programme should precede the design of the census questionnaire. Alternatively, all three documents may be considered jointly.

44. Some countries which conducted censuses during the period followed the sequence indicated above while others delayed the preparation of the tabulation programme till after census enumeration when manual processing was already in progress. In the latter cases, it was at times realized that certain tabulations which were required could not be produced either because the topics involved were not investigated in the census or the coding system did not permit the preparation of the required tabulations.

45. In almost all the censuses carried out during the period, the census organizers made some effort to ascertain the needs of data users before the final version of the tabulation programme was prepared. The efforts made by census organizers to hold consultations with data users, however, received mixed response. While some data users gave serious consideration to the draft tabulation programme and the proposed census topics, others only gave half-hearted reaction and their participation in any follow-up conference was at a low level. There is therefore considerable room for improvement in the dialogue between census organizers and data users at the early stages of census planning before the tabulation programme is finalized.

46. It is encouraging to note that in many cases there was collaboration between the subject-matter specialists and the electronic data processing personnel in the preparation of the census tabulation programme, at least its final version. Unfortunately, despite such collaboration, there were still delays in the completion of the design and testing of data processing plans which also delayed the preparation of census tabulation in a number of countries. The delay in finalizing the tabulation programme and in preparing editing specifications were some of the reasons. Other reasons were the late installation of processing equipment and lack of experienced data processing personnel.

47. There was also the tendency for some census organizers to prepare a long list of tabulations without any indication of the order of priority and at times without reference to the immediate basic analysis expected to be carried out by the census office.

48. In addition to the tabulation programme, most countries prepared a publication programme. The publications proposed were generally similar to those published during the 1970 round of censuses. They include: a number of volumes of statistical tables on demographic, social and economic characteristics as well as household characteristics; and analytical and administrative reports. Some countries included the analytical and administrative reports in one volume while others published the administrative report as a separate volume. It has been recommended that there should also be a publication on the highlights of the census results for the general reader and decision-maker.

49. It may be recalled that in 1973 at the ECA Seminar on techniques for evaluation of basic demographic data, it was stressed that the census publication programme should include analytical reports and monographs. Only a few countries have attempted to carry out the suggestion. Further, some of the census reports have been very technical and thus of limited value for the planner and decision-maker. Perhaps census data application may be maximized if census organizers prepare two types of reports which will serve the needs of statisticians and demographers on the one hand and planners, administrators and decision-makers on the other. In addition, census organizers should prepare an administrative report which should give detailed account of the census activities including the problems faced, how they were tackled and lessons learnt as well as the details of census costs.

8. Topics investigated

50. Generally, the United Nations global and African regional recommendations as well as topics investigated during the 1970 round of censuses provided the basis for the selection of topics for investigation in African censuses during the 1980 round.

51. The first draft list of topics was in many cases sent to major data users for their comments. In some countries the list of topics was also discussed by a technical advisory committee set up to advise census organizers on technical issues relating to the census. The comments of data users and advisory committees were taken into consideration in the preparation of a revised list of topics for field testing.

52. The following table shows the topics which were covered during the 1980 round of censuses in Africa and the number of countries which investigated those topics:

Census topics	No. of countries	Census topics	No. of countries
Geographic and migration characteristics		Economic Characteristics	
Place at time of census	36	Activity status/Economic activity	38
Usual residence	35	Occupation	42
Place of birth	43	Industry	36
Previous residence	14	Status in employment	37
Residence at past specified date	18	Sector of employment/ Type of establishment	8
Duration of residence/year of immigration	23	Secondary occupation	6
Place of origin	3		
Place of work	4		
Residence status (Present/Absent)	29		

Census topics	No. of countries	Census topics	No. of countries
Demographic and social characteristics		Housing conditions	
Sex	47	No. of houses/buildings	6
Age	47	Type of housing unit/ living quarters	17
Relationship	47	Quality of housing/ condition of dwelling	3
Citizenship/Nationality	42	Construction material of wall	24
Ethnicity/Tribe	31	Construction material of roof	25
Literacy	25	Construction material of floor	13
Language	13	Age of building	8
School attendance	37	Number of rooms	20
Educational attainment	44	Tenure/type of occupancy	22
Educational qualification	15	Water supply	26
Religion	13	Toilet facilities	21
Marital status	42	Bathing facilities	6
Form of marriage	1	Cooking facilities/ Kitchen	10
Age at marriage/duration of marriage	9	Source of fuel	8
Number of spouses	4	Source/Types of lighting	21
Children ever born alive	29		
Children living/dead	29	Community level variables	4
Births past year/date of last birth	30		
Survival status of last birth/past year births	21		
Survival of parents	9		
Survival of spouse			
Deaths in household past year	17		
Physical status/disability	8		
Transportation	6		

53. The topics which were investigated by all the 47 countries which conducted a census during the 1980 round are: sex, age and relationship. Some of the countries, however, included 'relationship' on the census questionnaire just for identification purposes and the information was not processed further to produce tabulations relating to household composition and structure.

54. A comparison of the topics covered in African censuses with those recommended by the African Working Group shows that the recommended topics were investigated in the censuses of at least 50 per cent of the African countries which took part in the 1980 round. However, the most popular topics other than sex, age and relationship which were investigated by at least 75 per cent of the countries are:

Place at time of census
Place of usual residence
Place of birth
Citizenship/nationality
School attendance
Educational attainment
Marital Status
Activity status/economic activity
Occupation
Industry, and
Status in employment

55. The least favoured of the recommended topics are: place of work and survival of parents which were investigated by only four and nine countries respectively.

56. The questions on housing conditions which were investigated by 20 or more countries are: construction materials of wall and roof, number of rooms, tenure/type of occupancy, source of water supply, toilet facilities and source/type of lighting. Some countries had population and housing questions on the same questionnaire though in some cases such questionnaire was used only in urban areas. In a few countries, for example the Gambia and Mauritius, the housing census preceded the population census in a two-phased census enumeration programme.

9. Enumeration procedures

57. Both the 'de jure' and 'de facto' approaches were used in the African censuses conducted during the period. Some countries asked questions which made it possible to determine both the 'de facto' and the 'de jure' populations while others enumerated either the 'de facto' population only or the 'de jure' only. In the cases where both types of populations were investigated, the household population was classified into three categories, namely, usual household members present (at reference night/day), usual household members absent and visitors. The detailed census questions were then obtained in respect of the 'usual members present' and 'visitors' if the population was being enumerated on a 'de facto' basis. If the population was being counted on a 'de jure' basis, the detailed questions were addressed to usual members present and usual members absent. In a few cases, the detailed questions were asked of all three categories and the distinction between the 'de facto' and 'de jure' population was made at the data processing stage.

58. The method of enumeration also was not the same in all the censuses conducted during the period though the general pattern involved the use of trained enumerators in a house-to-house canvassing.

59 In at least one country --Mauritius-- questionnaires were distributed to households a few days before census night, and heads of households were required to complete all questionnaire items except those on economic characteristics. Collection of the questionnaires started on the day following census night. Before collecting the completed questionnaires, enumerators checked the entries on the spot and completed the questionnaire columns on economic characteristics. In one other country --Mozambique-- a combination of the group assembly method and house-to-house canvassing was used in the enumeration of the population. The group assembly method was used in areas of dispersed settlements while house-to-house canvassing was confined to areas of high density.

60. Duration of census enumeration generally ranged from 5 to 14 days and in most cases actual enumeration started on the day following the reference night except the institutional population which was enumerated either a couple of days before the reference night or on the eve of the reference night and then updated the day following the reference night. There were however a few deviations from this general pattern.

61. In at least one country --Swaziland-- preliminary enumeration of the entire population was carried out during the ten days preceding census night and a final enumeration lasting four days carried out after census night to check whether respondents spent census night in the homesteads concerened and any necessary amendments were then made.

62. The procedure of advance enumeration is used as a strategy which would allow sufficient time for enumeration and yet would ensure simultaneous enumeration since extended enumeration period after census reference night/day would then be avoided. The procedure, however, is often not practicable and may rather lead to confusion which may adversely affect the quality of the census data.

63. It is therefore desirable that advance enumeration be restricted to institutional population; and it should be carried out just a day or two before census night and the information updated immediately after census reference night. Since institutions generally keep records of inmates, advance enumeration may be less difficult to manage than in the case of private households. Further, institutional population constitute a small proportion of the total population; and also it needs to be borne in mind that it would be more difficult for enumerators to relate the census items to the reference point when enumeration is carried out several days before the census reference point in time.

10. Quality control of enumeration

64. The control of the quality of the work done at the enumeration phase of a census programme cannot be over-emphasized. This is because the quality of field work with respect to coverage and the collection of the required information concerning respondences determines the basic accuracy of the census data.

65. The major elements involved in the control of the quality of enumeration include the selection and training of field staff, supervision, and control of performance of both supervisors and enumerators.

66. A review of the enumeration procedures of a number of the African censuses conducted during the 1980 round indicates that generally the quality control of the enumeration phase did not seem to have received adequate attention though the ratio of supervisor to enumerators of about 1:5 was a marked improvement over the situation during the 1970 round in some countries when the ratio was around 1:10.

67. Many countries organized training sessions ranging from a few days to two weeks for the supervisors and enumerators. In some countries the training consisted of lectures, class and home exercises, demonstration interviews and field exercises. In other countries where the training lasted only a few days the training consisted mainly of lectures and demonstration interviews. In at least one country, which may be classified in the latter group, the census organizers gave copies of the Enumerator's Handbook and the census questionnaire to selected geography teachers of secondary schools and then gave them a day's training. Senior students of secondary schools were then taught by the teachers as part of their geography lessons. Finally census enumerators were selected from the students. Field exercises did not form part of the training of the teachers, hence that strategy for the training of enumerators did not prove satisfactory.

68. Further, with a few exceptions, the enumeration procedures of the African censuses conducted during the period did not include any formal system of quality control of enumerators' work while enumeration was in progress. Supervisors were mostly given general instructions that they should check the work of enumerators to ensure good coverage and accuracy of completed questionnaires.

69. It is suggested that, in addition to ensuring adequate training of the field staff, it will be desirable to introduce a more formal system of quality control of enumeration in African census programmes. This should involve the preparation appropriate reporting forms or workbooks for completion by supervisors during the enumeration period. For the control of coverage, supervisors may be required to list independently a sample of houses or housing units in each enumeration area and later to check whether enumerators have covered those houses or housing units. In addition, supervisors may record the names of persons in each of the houses they have listed and compare with the questionnaires for those houses completed by enumerators. There is also the need for census organizers to prepare for the supervisory staff in the field a formal system for checking the questionnaires completed by enumerators, and definite standards for acceptance or rejection established. Such procedures would provide rational means for controlling the field operation to enable the necessary remedial measures to be taken while enumeration is still in progress. The principles of industrial quality control could also be adapted to the field of the control of enumeration.

11. Census coverage evaluation

70. It is now accepted that a national population census cannot be error-free. It has therefore been recommended that a census programme should include the evaluation of the completeness and accuracy of the census results.

71. The Working Group on Recommendations for the 1980 Population and Housing Censuses in Africa urged that "a post-enumeration survey (PES) for coverage evaluation should be planned, organized and executed as an integral part of a population census and that content errors be evaluated by other methods such as demographic analysis".

72. Despite the above recommendation, only 11 out of the 47 countries which conducted censuses during that period are known to have carried out coverage evaluation surveys as part of their census programmes. These are: Algeria, Botswana, Burkina Faso, Cameroon, Ghana, Guinea-Bissau, Ivory Coast, Kenya, Liberia, Senegal and Zambia.

73. The lack of enthusiasm to the use of a PES to evaluate census coverage and perhaps the non-recognition of the importance of a PES for arriving at the degree of confidence one may have in the census results in the African region may be due partly to the unsatisfactory experience of the few African countries which conducted such surveys during the 1970 round of census and partly to the extra expense involved.

74. It has been reported that the reasons for the failure of the PES programmes during the 1970 round include the following:

(a) unrecognizable boundaries of the sample areas and general weakness in the geographic preparation;

(b) a person often being known by different names; and the same name being used by a large number of persons in an area; and

(c) general fatigue and apathy of enumerators, supervisors and others including the respondents.

75. Improvement in census cartographic preparations may go a long way to eliminate or at least reduce the seriousness of the problem regarding boundaries of sample areas. The difficulty regarding names of persons is part of matching problems and its effect could be minimized with careful planning and testing.

76. It must also be pointed out that most of the coverage evaluation surveys carried out during the 1970 round of censuses followed the classic PES procedure in which emphasis was placed on a high quality survey which was expected to be more complete than the census so that it could form the basis for the measurement of the error in the census. However, as demonstrated by the African experience, the results of that procedure did not produce appreciable results to justify the extra effort and high cost involved in carrying out those surveys.

77. There has therefore been a re-examination of the early PES procedure and this has led to a variant of the method based on dual system of estimation. Thus emphasis is placed on the independence between the census and the survey rather than on attempts to achieve complete coverage in the PES. This procedure was used to estimate the coverage error in the 1974 population census of Liberia; and it was reported that the result was satisfactory and was again used in their evaluation of the 1984 census. Other countries which have used the procedure are Botswana (1981) and Ghana (1984). It is too early yet to indicate that the dual record approach would yield more reliable results. It may be recalled that Ghana (1970) and Ivory Coast (1975) used that approach but did not obtain satisfactory results.

12. Data processing

78. Generally, the data processing phase of African population censuses during the period under consideration involved both manual and machine processing operations.

79. The manual processing comprised limited editing, coding and verification of coding. The manual editing was either done as a separate operation or during the coding. In some countries, coding was done mainly by enumerators during enumeration through the use of questionnaires with pre-coded items. In such cases the manual processing performed in the office was very limited. The effect of such practice on the quality of census data needs to be studied. It is, however, suggested that it may be more desirable for enumerators to record both the verbal responses and the codes rather than the codes alone to enable adequate verification after enumeration.

80. In the countries where coding was done wholly in the office, the general practice was for the codes to be written on the questionnaire. In at least one country, however, even though the initial coding was done on the questionnaires, it was decided to transcribe the codes on to coding sheets before the keying operation. It was feared that, since the alignment of the rows on the questionnaire was not done well by the printer, there might be considerable errors if the codes were keyed directly from the questionnaires. The transcription unduly prolonged the manual processing of the census data.

81. One major problem in the manual processing phase of the census programmes was inadequate record keeping of the performance of coders and verifiers. Thus there was the general tendency to verify coding on 100 per cent basis and there was very minimal feedback, if any, from verification teams to coding teams since record of types of coding errors being made were not kept.

82. The need for record keeping to monitor the production rates and control quality of work of the various processing personnel cannot be over-emphasized. Such records also provide valuable information for planning future operations.

83. Machine processing continued to be one of the serious bottlenecks in census programmes. There was, however, some improvement in the timely collaboration between data processing personnel and subject-matter specialists in the design of census questionnaires and the preparation of tabulation programmes in some countries. In other countries such contacts were made at a rather late stage of census planning, resulting in problems in analysis of data.

84. The need for the design and testing of machine processing plans including computer programmes during the census preparatory activities phase was generally recognized and the necessary provision made in census time-tables. It was often expected that the pilot test would also be used to finalize the machine processing plans but in many cases the expectations were not realized due to a combination of personnel and hardware limitations. In some instances the problem was mainly due to the lack of experienced data processing staff and the late arrival of the international resident advisers. In other instances there were considerable delays in the site preparations and installation of the data processing equipment.

85. The result was that in a number of countries there was an interruption of flow of work from manual processing operations to keying and preparation of tabulations. This in turn caused delays in the publication of census results.

86. A persistent observation has been the inordinate delay in the processing of data. The lack of computer facilities attached to the statistical offices whereby they have to depend upon other agencies whose needs are to be met first before the census data processing is taken up has resulted in delays in the production of tables thus delaying the other processes like evaluation, analysis, interpretation, dissemination and utilization of the data. This is an urgent matter requiring attention by all concerned and unless remedied, may entail undue delays and consequent loss of value of the information collected. Mini and micro computers or other aids may relieve the situation and every effort must be made to rectify the situation with the urgency it deserves.

87. In some countries the delays in data processing were due in part to the fact that data validation was done manually. It is therefore suggested that the computer together with efficient statistical software packages which are now available should be used in data editing in order to complete the processing of census data timely and also ensure more accurate data.

88. It must be stressed, however, that in order to derive maximum benefit from the use of the computer for data validation, there is the need for effective co-operation between subject matter specialists and data processing staff in the development of the edit specifications and procedure.

89. Other data processing problems during the period under review were related to environmental conditions, mainly the fluctuations in the voltage of electricity supply and frequent power cuts. Such problems may be alleviated through the installation of power generators as stand-by and Uninterruptible Power Supply (UPS) systems.

13. Use of sampling in censuses

90. It is generally recognized that sampling plays an important role in a census programme. The various phases of census operations in which sampling has been used to good advantage include census tests, enumeration, quality control, data processing and evaluation programmes.

91. In the African censuses conducted during the period under consideration sampling has been used particularly in testing census questionnaires and enumeration procedures. While some countries used random sample design for such tests others used purposive sampling. It must be pointed out that if the objective of a census test is not to derive any quantitative measures then there is no need for probability sampling. Indeed it is often desirable to use purposive sampling in some census tests since the procedure involves the selection of enough cases of various kinds based on the available information or local knowledge.

92. In a number of censuses conducted during the period though probability sampling was designed at some expense for the pilot censuses the questionnaires were not fully processed to make any statistical inferences. Only general impressions were obtained through visual inspection of the completed questionnaires.

93. The growing need to cover as many topics as possible in censuses also made a number of countries to use sampling to investigate some census topics. This was done generally through the built-in sample procedure in which a long questionnaire was used to cover a sample of the population while a short questionnaire was used on hundred per cent basis. The countries which used this procedure include: Liberia, Sudan, Tanzania and Zambia. Generally the design involved a single-stage cluster sampling with census E.As as sampling units. In at least one country, Lesotho, however the long questionnaire was administered to every tenth household.

94. Some of the countries which used EAs as sampling units in a single-stage area sampling approach attempted to decrease the average size of their census EAs which for the 1970 round was about 1000 persons to about 500 persons during their cartographic preparations. It was the intention to make EAs more efficient for sampling purposes. Time and cost constraints, however, combined to frustrate such efforts. It would be desirable if those attempts were resumed in any subsequent post-enumeration cartographic work.

95. It needs also be mentioned that some countries did have field problems in the simultaneous administration of the long and short questionnaires. In a number of cases the wrong type of questionnaires were used in a sample or non-sample area. The need for strict control of the distribution of documents can therefore not be over-emphasized.

96. Another census operation in which some countries such as Ethiopia used sampling during the period under consideration was data processing. The objective was mainly to produce advance tabulations in order to make some census results available at an early date.

97. Generally the procedure involved the processing of the questionnaires of a sample of EAs for advance tabulation. The experience, however, has been that the recourse to the preparation of advance tabulations has not reduced significantly the time lag between census enumeration and the release of the basic census tabulations. Further, in some instances, the strategy has rather delayed the completion of the planned series of tabulations with a resulting increase in the total census cost.

98. It is therefore suggested that census organizers should rather ensure timely planning of data processing procedures including the selection and testing of appropriate software as part of census pre-enumeration activities in order to speed up the processing of census data. Indeed, with the available high speed data processing equipment and timely planning, it may not be necessary to resort to advance tabulations to ensure early release of census results.

99. Sampling has also been used by some African countries in their census evaluation programmes. As stated earlier, only 11 countries are known to have conducted post-enumeration sample enquiries to evaluate their censuses during the period 1975 to 1984. A brief review of the African experience regarding post-enumeration coverage evaluation survey has already been given in section 11 of this report.

14. Analysis of data

100. The prime purpose of a population and housing census is the production of statistical data to satisfy national needs for administration, planning and policy making. A census does not stop at the mere production of the data. The data should be evaluated, analysed, published and disseminated in a manner which can be used by the various users.

As a matter of fact, the latest definition of a census given by the UN is, "A census of population is the total process of collection, compiling, evaluating, analysing and publishing or otherwise disseminating demographic, economic and social data pertaining at a specified time to all persons in a country or in a well delimited part of a country" (UN, 1980). Contrasting this definition with the earliest one given also by the UN, "A census of population may be defined as the total process of collecting, compiling and publishing demographic, economic and social data pertaining at specified time or times to all persons in a country or delimited territory" (UN, 1964), it is clear that the focus of a census has perceptibly changed from mere collection, compilation and publication to the further steps of evaluation, analysis and dissemination of the results.

101. The quality of data, the types and varieties of analyses which can be carried out and the uses to which they can be put depend to a very large extent on the preparations and precautions which went into the data collection, its compilation and publication. Hence in the evaluation of the situation in respect of analysis of the data collected by the countries in the region during the period under consideration, we should keep in mind the pre-enumeration, the enumeration and post-enumeration activities.

102. Evaluation and analysis of the data collected and interpretation of the results in a manner which can be readily utilized by planners, policy makers and programme implementers is an important stage in the census. In order to achieve best results, it is advantageous to associate the analysts from the very early stages of planning a census. Consultations with users should be done by the data producer in conjunction with the analysts so that the three aspects --data production, data analysis and data utilisation-- are co-ordinated.

103. Since evaluation and analysis were not specifically spelt out in a few of the census programmes, financial and other constraints impeded the progress. It is advisable that not only the analysis, but the publication and dissemination of results should be envisaged at the preparatory stages of a census.

UN, Principles and recommendations for population and housing censuses, Series M No. 67, New York, 1980.

UN, Principles and recommendations for national population censuses, Series M No. 27, New York, 1964.

104. Since a large number of countries had their first census experience during this period, and trained manpower is in short supply, international expertise had to be utilized to assist countries in carrying out evaluation and analysis of the data. Even though it is useful to have some expertise from outside, it is necessary to stress that local personnel should benefit from this technical co-operation assistance. However, it has been observed that the experts being hard pressed for time did not devote as much time as required to train their counterparts so much so that when the experts left the vacuum more or less remained. Every effort should be made to involve local personnel fully in the analysis and interpretation of the data. This will not only ensure their training, it would also benefit the analysis because the knowledge of the local personnel on local conditions would be better and the analysis would be more meaningful. Local personnel should be fully associated in the exercise and get on-the-job training so that a cadre of personnel could be built up and dependence on long term external assistance reduced if not eliminated. Middle level and higher level on-the-job training of personnel for short periods of up to 3 weeks should be organized to expose local personnel to the techniques and methods. The experiences of Tanzania, Zimbabwe, Zambia and Mauritius are available for other countries to emulate. Utilization of training facilities in Accra and Yaounde should also go a long way in meeting some of the needs of the region. Associating middle level personnel in the analysis exercise as attempted by some countries is laudable and worth emulation by all in their 1990 round.

15. Dissemination of information

105. The usual practice of census offices in the past has been to publish the data and perhaps the evaluation, analysis and methodology reports. Some prepared an administration report. It has been noticed that the impact of the information on the eventual users is not as much as needed by the mere publication of results and it has been suggested that there should be a seminar or group of seminars not only to disseminate the findings and their implications but also to involve the users in the uses of the data and further production of data in future.

106. As mentioned earlier, the need for preparation of two types of analytical reports --a technical and a practical one-- to meet the diverse data users has been brought out by the experience of the 1980 round of censuses. Planners, policy makers and administrators will benefit more from the interpretation of results, their implications and suggestions for action.

107. A few months after publication of census results it would be desirable to organize a national or in case of large countries, regional seminars involving planners, policy makers and adminstrators. If data on socio-economic characteristics have been analysed and especially if projections have been prepared, the involvement of sectoral ministries in such seminars would be mutually beneficial. National seminars have been held in Ivory Coast, Burundi, Sudan, etc., and a series of regional seminars are being held in Tanzania. Such seminars should be held in all countries utilizing data from their latest census and surveys. International assistance --both financial and technical-- may be extended in organizing the seminars.

108. The needs for introspection and stock taking is as important in a census as in any operation involving huge investments of men and materials. Discussion of the lessons learnt and how to improve future efforts should be held so that not only the particular country but others could benefit from the experiences.

109. Population projections not only at the national level but also at sub-national and sectoral levels should be prepared and the implications and policies needed to take care of the unfolding situations. In addition to preparing the usual three variants --viz, the high, medium and low-- there is need for preparation of speculative projections with varying fertility, mortality, migration estimates to show the planners the implications of various demographic options.

110. Integration of population variables in planning is considered an essential purpose of data analysis and the demographer/analyst must associate himself with the planning agency in assisting in the full utilization of results. Dialogue between the demographer and planner is as essential as that between demographer and statistician in the first two stages --data collection and analysis. The three specialists -- statistician, demographer and planner-- should reinforce each other in order to reap the maximum benefit from a census operation. In this, the role of demographer as the vital link between the data producer and the data user cannot be over-emphasized.

16. Conclusions and recommendations

111. Considering the fact that for 19 out of the 47 countries which took a census during 1975-84 it was their first census experience and even for most of the others it was only the second census after national independence, the types and varieties of data collected was impressive. The review of the censuses conducted during the period has brought into focus some of the experiences and lessons which would prove useful for future censuses and other data collection programmes. The following are summary recommendations which may assist in taking full advantage of the past lessons.

(i) The various activities and aspects of a census should be given adequate consideration and time-tables and budgets prepared in advance and adhered to.

(ii) Data users should be involved in the discussion of the questionnaires, tabulation plans and plan of analysis to ensure full utility and relevance of data collected.

(iii) Plans for evaluation and analyses of the data should be formulated from the very first stages of preparations for a census.

(iv) It is advisable to have the analysts and data processing experts associated at the earliest stages of data collection so that the data collected could be used for the types of analyses needed.

(v) Data processing has been one of the most difficult problems faced by countries. Inordinate delays have been caused by bottlenecks in data processing. Efforts to reduce the time by utilising mini or micro computers with appropriate software by statistical offices should be explored.

(vi) It is recommended that census data should be evaluated and if a post enumeration survey is planned, then adequate preparations should be made in advance so that the exercise does not become unproductive.

(vii) Preparation of administrative reports documenting the various steps and stages of a census including expenditures and problems faced and how they were tackled would be useful not only for future reference for the country itself but also for other countries.

(viii) In addition to publishing the detailed tables, the preparation of analytical reports, monographs and general user oriented publications have been noted to be useful and should be planned from the early stages of data collection.

(ix) In addition to publication of tables, preparation of special data tapes and local area statistics may be useful for deeper analyses and regional planning.

(x) Many countries depended on long term resident international expertise to carry out evaluation and analysis of their census. While international co-operation and exchange of know-how is laudable, the close association of local personnel in such exercises should be ensured and insisted upon. In view of high cost, perhaps short duration intensive consultancy missions by international experts may be advantageous, if local personnel could be effectively associated with the exercise.

(xi) Because of lack of adequate trained manpower for analysis and interpretation of data, it is considered beneficial for not only higher level but also for middle and lower level personnel to be trained on-the-job in the manipulation of data. Short duration intensive in-service training programmes on data analysis is recommended.

(xii) Dissemination of the results of a census is an important agenda of a census undertaking and not only national seminars but perhaps regional or topic specific seminars like those on regional development, education, health or housing may be fruitful.

(xiii) An important use of census data is in planning and every effort must be made to integrate population and related variables in the planning process.

(xiv) Population projections at national, sub-national and sectoral levels should be prepared not only under the usual three variants but speculative illustrative projections should be made to demonstrate the implications of various policy options.

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KILIMANJARO PROGRAMME OF ACTION ON POPULATION - FOLLOW-UP

TABLE OF CONTENTS

	Page	Paragraph
INTRODUCTION	1	1-2
SUMMARY OF KPA RECOMMENDATIONS	1-3	3-13
ACTION TAKEN SO FAR ON IMPLEMENTATION OF THE KPA	3	14-16
ACTION FOR FUTURE MONITORING OF THE KPA	4-5	17-22

ANNEX I

KILIMANJARO PROGRAMME OF ACTION
FOR AFRICAN POPULATION AND
SELF-RELIANT DEVELOPMENT

INTRODUCTION

1. Population trends have had a considerable impact on the present economic and social crisis in Africa and will continue to do so for many years ahead if vigorous and comprehensive population policies are not adopted now. At its present growth rate of about 3.1% per annum, Africa's population will double in 23 years. At present many African Governments are unable to provide (a) primary education to all the primary school age group; (b) employment to the many unemployed; (c) adequate services like clean drinking water, sewerage, transport, health, and housing. How then in the light of the population doubling every 23 years can African Governments hope to be able to cope up with development problems of improving the living standard of their people? The potential for human numbers to increase is far much greater than governments' abilities to accelerate development efforts to meet the needs for the growing numbers. It is therefore apparent that population factor should be considered as a centeral focal point and an integral part of social and economic development strategies and policies in resolving African problems.

2. In January 1984 at the Second African Population Conference, the African Governments adopted the Kilimanjaro Programme of Action on Population (KPA) in preparation for the International Conference on Population (ICP) held in Mexico in August 1984. Both the ECA Conference of Ministers and the African Heads of States and Government of the Organization of African Unity (OAU) have endorsed the KPA. This reflects the realization by African Governments of the implications of population trends on socio-economic development. The KPA needs to be translated into action. African Governments need to show real commitment to this end or else the KPA will be like other declarations which once adopted are never implemented. This paper briefly summarises recommendations contained in the KPA and suggests follow-up on its implementation.

SUMMARY OF KPA RECOMMENDATIONS

3. The intention here is to briefly summarize the recommendations from the KPA. The full text of the KPA is attached as an annex to this paper.

4. Recommendations of the KPA addressed to ECA member States cover the following areas: (i) population and development strategy and policies; (ii) fertility and family planning; (ii) mortality and morbidity; (iv) urbanization and migration; (v) changing role of women in development process; (vi) children and youth; (vii) population data collection, analysis, training and research; (viii) population information, (ix) community involvement and role of private and non-governmental organizations.

5. On population and development strategy and policy, the KPA recommends that population should be a central component in formulating and implementing policies and programmes for accelerated socio-economic development in view of the fact that population and development are interrelated. It urges governments to create or strengthen high level population units to ensure effective monitoring and evaluating strategies for integrating population and development. The KPA attaches great importance to continued creation of awareness of population issues in development, particularly, the implications of population trends on development strategies regarding health, education, housing, employment and nutrition.

6. Recommendations on fertility and family planning urge governments to recognize the usefulness of family planning and child-spacing to improve the well-being of the family and to reduce fertility. The KPA recommends that family planning programmes should also aim at helping the sterile and subfecund couples and individuals who want to have children. Furthermore, governments are urged to ensure the availability and accessibility of family planning services to all couples or individuals seeking such services freely or at subsidized prices. In view of low age at marriage, the KPA recommends that governments should raise the age at marriage.

7. In the area of morbidity and mortality, the KPA shows great concern of the high levels in infant, childhood [illegible] morbidity and mortality, especially in the rural areas. It accordingly recommends the intensification of national efforts and programmes to reduce these levels in order to attain the objectives of the Alma Ata Declaration. The integration of health policies in other development sectors such as education, employment, urban, rural and regional planning is stressed in the KPA. Provision of safe drinking water and improvement in nutrition are some of the other measures recommended as a means of reducing the high levels of morbidity and mortality.

8. Regarding urbanization and migration, the KPA recommends that governments should formulate comprehensive urbanization policy which aims at (a) reducing the current high migration to capital cities and other large urban centres, (b) development of regional medium-size towns. Particular emphasis is on re-vitalizing rural economies and providing in rural areas, socio-economic services which stimulate and sustain balanced and self-reliant development. The KPA also gives due attention to the problems of international migrants and refugees and safeguard of their property and respect for their culture.

9. The KPA places special attention on women's role in development. It calls for the widening and improving their role through education, employment and other opportunities; reducing burdens on rural women through the introduction of appropriate technology in agriculture, industry and domestic work.

10. In dealing with the problems related to children and youth, the KPA recommends programmes to expand education and vocational training, provision of adequate opportunities for gainful employment, special programmes for school dropouts, inclusion of population and family life education in formal and vocational training to prepare the young for responsible parenthood and legislation to protect the rights of children.

11. KPA attaches great importance to population data collection, analysis, training, research and dissemination of population information as these form the basis for formulation, and evaluation of socio-economic development policies and programmes. It then accordingly recommends that governments should improve data collection, analysis and use of such data in planning, training, research and population information dissemination activities.

12. Recognizing the importance of the community involvement in the success of the implementation of the KPA, the KPA urges governments to involve private and non-governmental organizations and the community in the formulation, implementation and evaluation of population programmes.

13. The recommendations addressed to international organizations, donor governments and agencies recognize the important role played by these organizations in supporting population programmes and activities in Africa. The recommendations emphasize the need for the various international organizations, donor governments and agencies to: (a) collaborate closely with ECA in implementation of the KPA so as to reduce duplication of efforts; (b) continue and increase their financial and technical support in assisting African governments in implementation of the recommendations contained in the KPA. The special role of UNFPA in supporting population activities is singled out and governments and donor agencies are urged to provide more resources to enable UNFPA to provide more support to national governments.

ACTION TAKEN SO FAR ON IMPLEMENTATION OF THE KPA

14. ECA member States attach great importance to the KPA and this is reflected in ECA Conference of Ministers resolution 506(XIX) on the KPA adopted at the 10th session in May 1984. This resolution endorsed the KPA recommendations summarized above. It, among other things, (a) directed the ECA Executive Secretary to take appropriate steps to ensure that the principles, objectives and recommendations of the KPA are incorporated in the Work Programme of the Commission, (b) requested the ECA Executive Secretary to report to the Conference of Ministers at its eleventh meeting the outcome of the International Conference on Population and progress made in integrating the recommendations of the KPA (c) requested the ECA Executive Secretary to report also to the 21st Session of Assembly of Heads of State and Government of OAU on the Kilimanjaro Programme of Action on Population.

15. Regarding (a) above, the ECA secretariat has already started integrating the KPA principles, objectives and recommendations in the 1986-1987 work programme of the Commission. These include studies on (i) relevant legislative instruments affecting the formulation and implementation of population policies and (ii) interrelationship among infant and childhood mortality, socio-economic factors and fertility. In the case of (b) the ECA Executive Secretary reported to the 11th ECA Conference of Ministers on the outcome of the ICPD. The 11th Conference of ECA Ministers adopted the Second Memorandum on African Economic and Social Crisis. In that memorandum, the KPA is reflected to form an integral part of the long-term development strategies in resolving African problems. Regarding (c), the ECA Executive Secretary reported to the 21st Assembly of Heads of State and Government of OAU in July 1985 on the Kilimanjaro Programme of Action on Population. The Heads of State and Government of OAU also endorsed the principles, objectives and recommendations of the KPA in the strategies for accelerated socio-economic development in Africa.

16. Since its adoption in 1984, the KPA has not been monitored at national level. However, as a first step, country representative will briefly inform the 4th Joint Conference of the activities that they may have taken so far to implement the KPA.

ACTION FOR FUTURE MONITORING OF THE KPA

17. One of the problems envisaged in the monitoring of the KPA relates to lack of specified targets to be achieved within a given time horizon regarding mortality and fertility. To facilitate the monitoring of the KPA, it is suggested to adopt mortality targets in the recommendations of the ICP held in Mexico in 1984. These are:

(i) "Countries with higher mortality levels should aim for life expectancy at birth of at least 60 years and infant mortality rate of less than 50 per 1000 live births by the year 2000" - recommendation 14.

(ii) "To reduce maternal mortality by at least 50 per cent by the year 2000, where such mortality is very high (higher than 100 maternal deaths per 100, 000 births)" - recommendation 18(a)

18. In the case of fertility where there are no recommended targets in both the KPA and ICP, governments which have policies to reduce fertility should adopt their own quantitative goals on this to assist in the monitoring and follow-up action. Measures that should be taken by governments to reduce fertility levels should include the following:

(i) to change the attitudes of the people from large families to small size families emphasizing the health benefits of small family size. This will require comprehensive population information education programmes backed by strong political will;

(ii) expanding and improving education programmes of the women;

(iii) improving employment opportunities for women outside the home,

(iv) introducing or expanding family planning services and facilities;

(v) liberalizing laws governing contraceptive availability and use;

(vi) increase of the age at marriage.

19. Continued migration from rural to urban areas is one of the serious problems acknowledged by most African countries. Some countries have adopted some policies to curtail rural to urban migration but without any success. Countries should review their policies on rural development and urbanization with a view to redesign more effective policies. To reduce concentration of population in one or a few urban areas and to encourage the population to remain in the rural areas policies and measures must be taken to:

(i) develop more medium size towns in the various parts of a country;

(ii) rural development should provide in rural areas the services and facilities which are available to urban population, e.g. education, clean drinking water, health, transportation, employment opportunities, etc.

improve agricultural production in rural areas through provision of credit facilities, agricultural extension services, good prices to farmers for their produce etc.

20. It is essential for national governments to set up the necessary machinery for the follow-up on the implementation of the KPA. For this purpose, it is recommended that population commissions should be established where they do not yet exist to be responsible for formulation of relevant population policies commensurate with socio-economic development goals. The population commissions should be chaired by a very high political authority e.g., vice-president, prime minister, or a minister. All government ministries should be represented in the commission. In addition, there should also be representation from (a) non-government institutions involved in population related activities, e.g. family planning organizations, (b) various religious organizations, etc. The population commission should also be given the responsibility of monitoring the KPA and co-ordinating the various population activities done by various government ministries, departments as well as non-governmental organizations. Population units should be created within planning ministries where such units do not already exist to act as secretariat for population commissions.

21. For future meetings of the Joint Conference of African Planners, Statisticians and Demographers, starting 1986, it is suggested that the implementation of the KPA should be reviewed. Member States should designate a national office that should be responsible for follow-up on the implementation of the KPA. ECA secretariat would work closely with the designated offices in monitoring the follow-up implementation of the KPA. ECA member States will need to co-operate with the secretariat in providing information required for the monitoring exercise which will involve the use of a questionnaire.

22. Detailed studies need to be carried out by member States as well as by ECA on implementation of population policies and programmes in the light of the KPA.

ANNEX I

KILIMANJARO PROGRAMME OF ACTION FOR AFRICAN POPULATION AND SELF-RELIANT DEVELOPMENT

PREAMBLE

The Second African Population Conference:

Reviewing the demographic situation in African countries since the first Conference in Accra in 1971;

Reviewing progress made by African Governments in improving knowledge of the population of the African continent;

Reviewing progress made individually and collectively by African Governments in attaining the goals and objectives of the World Population Plan of Action (WPPA) adopted in Bucharest in 1974,

Recognizing the tremendous efforts made by governments of the region to respond to the development needs of the African people;

Addressing itself to population problems currently affecting development in the African region;

Noting with gratification the individual and collective will and commitment of African Governments to the strategy of self-reliant development as spelled out in the Lagos Plan of Action and Final Act of Lagos and reiterated in the Addis Ababa Declaration of 1983,

Noting with satisfaction African Governments' commitment to the objectives and goals of the Alma Ata Declaration on Primary Health Care as demonstrated in national health policies and programmes;

Recognizing the extensive efforts being made since Bucharest to encourage policy-makers, planners and researchers in the integration of population and development;

Noting with appreciation international, regional, interregional and national efforts to promote demographic training and research in the region;

Noting with satisfaction the growing interest of African Governments in establishing national institutional frameworks for more effective integration of population in national development planning;

Emphasizing that all African population problems will not be completely solved until apartheid is abolished from South Africa and Namibia is liberated;

Noting with appreciation the progress made in enhancing the status of women and integrating them in the process of national development,

Further recognizing the very significant contributions in financial, material and human resources of governments, donor agencies and particularly UNFPA, and governmental and non-governmental organizations providing support for population programmes in African countries;

Mindful of the cultural, religious, political, ethnic, demographic, geographical and socio-economic diversities of African countries, member States of ECA;

Mindful that despite current diversities in national perception of population problems, ECA member and associate member States share certain common concerns about population and development in the region;

Stressing that disarmament, the maintenance of peace and international co-operation and commitment to peace are fundamental conditions for achieving economic and social development;

Committed to the ideal of more equitable distribution of resources at the national and international level;

Advocating closer co-operation and collaboration among governments in their efforts to find lasting and appropriate solutions to population problems of high mortality and fertility, uneven population distribution, poverty, disease, malnutrition and refugees;

Reaffirming its collective commitement to accelerate self-reliant, social and economic development for the well-being of African peoples;

Noting with great concern the rapid rate of population growth in recent years and the stresses and strains which this increasingly imposes on African Governments' development efforts and on the meagre resources at their disposal;

Noting that all couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children and to have the information, education and means to do so;

Noting further with concern the serious and worsening food situation as well as the devastating effects of natural and man-made disasters;

Adopts the following Programme of Action for African Population and Self-reliant Development.

Background

The Second African Population Conference organized by the Economic Commission for Africa (ECA) and financially supported by the United Nations Fund for Population Activities (UNFPA) was convened in Arusha, United Republic of Tanzania, from 9 to 13 January 1984. The Conference reviewed progress so far achieved in the implementation of the World Population Plan of Action (WPPA) adopted in Bucharest in 1974 and the recommendations of the Regional Post-World Population Conference Consultation held in Lusaka, Zambia, in April 1975 and identified actions to be taken in the future.

The Conference reviewed conclusions and recommendations of previous population meetings organized in the region and the impact of these on the development of population work in Africa and the implementation of the WPPA.

In conducting these reviews the Conference assessed, inter alia, the demographic situation in Africa and future trends, progress achieved in conducting population censuses and surveys in African countries, the formulation of national population policies in the context of national development plans and strategies, the formulation and implementation of national population programmes for integrated rural development, reduction in mortality and fertility levels and enhancing women's status in development.

In its assessment of the demographic situation of the African region and future trends, the Conference observed that the African population of about 439 million was likely to double by 2010. Although the continent's population remained a small percentage of world population, the current high levels of fertility and mortality give rise to great concern about the region's ability to maintain even living standards already attained since independence.

The Conference noted the great variation in population and distribution patterns both within each country and between countries, and expressed concern about the rapid rate of urbanization which contributes to rising urban problems in the region.

The rapid increase in urban populations demands careful and balanced socio-economic planning which will attain the goals set out in the Lagos Plan of Action for an integrated and self-reliant development strategy for both the rural and urban economies.

High population growth rates in African countries in the last quarter of a century have resulted in a relatively young population. Thus over half the population of Africa is less than 20 years old. This fact has far-reaching social, economic and demographic implications for the future development of the continent.

The drought and refugee problems which have plagued many countries in the region have exacerbated the recurrent food problems, and imposed obstacles in national efforts to improve living conditions and reduce mortality.

Improved knowledge of the demographic situation in the region during the 1970s, thanks to the African Census and the World Fertility Survey programmes as well as other demographic surveys, has shown that the current population will increase considerably by the end of the century. A recognition of this trend has spurred many governments to address themselves to policy and programme issues related to family planning in the context of maternal and child health programmes, population settlement projects and the greater integration of population variables in development planning.

Experience among most countries in the region has demonstrated that reductions in fertility and mortality are likely to be achieved when relevant programmes are formulated and implemented as an integral part of an overall process of social and economic development. The implementation of such programmes should give due consideration to the specific cultural, ethnic and religious values of each country.

Africa is a region with the most diversified demographic situation in the world. Africa as a whole presents very distinct characteristics and patterns relative to other regions of the world.

In the light of this analysis, the Conferene adopted the Kilimanjaro Programme of Action for African Population and Self-reliant Development.

PRINCIPLES AND OBJECTIVES

Principles

(a) Population should be considered as a central issue in development strategies and plans.

(b) Population and development are interrelated.

(c) The right and responsibility of every country to tackle its population problems should be recognized.

(d) The formulation and implementation of population programmes should exploit African Governments' commitment to self-reliant development and regional, interregional and intercountry collaboration.

(e) National population programmes should aim at responding to nationally perceived problems as identified by empirical research findings.

(f) International co-operation in the field of population should respect socio-cultural values.

Objectives

1. Improvement in the quality of life in the region requires effective programmes to reduce current high levels of fertility and mortality and alleviate the uneven distribution of population.

2. Provision of programmes that will respond to the needs of sterile and subfecund couples.

3. Achievement of population growth rates that are compatible with the desired economic growth and social development goals.

4. Improvement of living conditions in the rural areas to enhance integrated rural and self-reliant development aimed at stemming current rural to urban migration.

5. To evolve urbanization policies and programmes aimed at developing medium-sized cities and improving living conditions of the metropolitan areas and capital cities.

6. To improve and increase national expertise in the population field especially training, research and programme management and implementation capabilities.

7. To sustain and develop ongoing efforts in demographic data collection and analysis for economic and social development planning and use of data.

8. To improve population information exchange for enhancing national interest and international co-operation.

9. To promote population policies and programmes which enhance the status of women in development.

10. To promote population policies and programmes which respond to the needs of special groups.

11. To promote the formulation and implementation of comprehensive population policies which provide lasting solutions to the major problems of high mortality and fertility, uneven population distribution, growing unemployment, stagnation of living standards and unequal income distribution.

12. To promote policies which enhance and protect the rights and welfare of children.

RECOMMENDATIONS

A. TO GOVERNMENTS OF MEMBER STATES OF ECA

Population and development strategy and policy

1. Population should be seen as a central component in formulating and implementing policies and programmes for accelerated socio-economic development plans.

2. National efforts to enhance the use of demographic data in development planning should recognize the interrelated nature of population and development.

3. Greater efforts should be made to create increased awareness of the importance of population in the development process and highlight the need for more education and information on the social and economic consequences of demographic changes on national development strategies in health, education, housing, employment and nutrition.

4. In order to integrate population in the development planning process, governments are urged to create or strengthen high-level population units which ensure adequate integration of population and development policies and programmes especially in rural areas.

5. National plans should aim at maximizing the productivity of work by men and women and creating the atmosphere suitable for ensuring balance between population and economic growth.

6. Efforts to integrate population and development should aim at producing a healthier, less dependent and more productive population.

7. National efforts to create greater awareness of the interrelationships between population and development should include the provision of greater information to politicians and policy-makers and the public on the dynamics of population change and the impact of such change on current and future development.

8. Greater use should be made of existing information channels and mechanisms for population education and information.

9. Governments should establish effective mechanisms for monitoring and evaluating strategies for integrating population and development.

10. Population and development policies should seek to develop the cultural values of each country.

11. Population and development policies should in each country seek to attain targets set out in the World Population Plan of Action.

12. The integration of population in development planning should be extended to subregional and district level in each country.

13. Inter-country collaboration in population and development planning should be encouraged in the spirit of the Lagos Plan of Action.

14. Countries are requested to intoduce legislation on population matters which seek to protect the fundamental individual human rights and which facilitate the achievement of individual and national welfare objectives.

15. Governments are requested to enact appropriate legislation and introduce suitable programmes for protecting the well-being of the aged.

16. Governments should intensify technical co-operation among developing countries to enable them share expertise and experiences in population activities.

Fertility and family planning

17. Governments should take appropriate measures to protect and support the family which is the basic unit of society.

18. Countries should recognize that a substantial decline in infant and childhood mortality is a pre-requisite for fertility decline.

19. Countries should recognize the usefulness of family planning and child spacing on the stability and well-being of the family.

20. Countries are urged to incorporate family planning services into the maternal and child-health services.

21. Special attention should be paid to educating and motivating the population at grass-roots level on the health, social and demographic values of family planning.

22. Wherever possible family planning education should be incorporated in training programmes for women, men and the youth.

23. Governments should ensure the availability and accessibility of family planning services to all couples or individuals seeking such services freely or at subsidized prices.

24. Family planning services should include services to sterile or subfecund couples or individuals who want to have children.

25. Governments should allocate adequate resources and appropriate training to family planning personnel to make family planning programmes more responsive to local cultural values and individual couple preferences.

26. National family planning programmes should make available a variety of methods to ensure free and conscious choice by all couples.

27. Governments should consider setting up family planning outlets which include the utilization of existing health facilities and community-based delivery systems in order to reach those communities, couples and individuals who are currently not being served by the conventional delivery systems.

28. Governments should make necessary efforts to improve planning, funding and management for more effective implementation of MCH/family planning programmes through budget and plan linkages, balancing and consolidating existing service capacity, mobilizing additional domestic and external resources, improving cost effectiveness and co-ordinating manpower planning and training strategies for existing services.

29. In view of current low mean ages at first marriage for females, national programmes, especially in education, should aim at raising the age at marriage.

30. Governments should enact legislation which protects the family and the institution of marriage.

Morbidity and mortality

31. African countries should intensify national programmes to reduce current high levels of infant, childhood, and maternal morbidity and mortality, especially for mothers and children in the rural areas.

32. Countries should review existing health delivery systems and intensify national health services systems which seek to attain the objectives of the Alma Ata Declaration and which ensure maximum community participation in the formulation, organization, delivery and evaluation of such services.

33. Countries should adopt health services systems which respond effectively to the major morbidity causal problems.

34. Countries should take appropriate and prompt action to reduce to the barest minimum the current overdependence on imported technology for the provision of health services. In this light, research in traditional medicine should be intensified.

35. Governments should consider the provision of safe drinking water and improved nutrition as a principal means of reducing current high levels of morbidity and mortality.

36. Governments should ensure equitable distribution and easy accessibility to health care delivery services to all regions of the country.

37. Health policies and programmes should be integrated in other development sectors such as education, employment and urban, rural and regional planning.

38. Countries should encourage multi-disciplinary research in mortality and morbidity and should use the results of such research in policy and programme evaluation and re-orientation.

39. Governments should promote research in infectious, parasitic and respiratory diseases which contributes so much to morbidity and mortality in countries of the region. Such research should focus among other things on the environmental and social conditions that sustain high prevalence of these diseases.

Urbanization and migration

40. Countries should seek to integrate into the overall development planning process a comprehensive urbanization policy which aims, inter alia, at reducing the current high migration to capital cities and other large urban centres, developing regional medium-size towns and ensuring an effective economic inter-dependence between rural communities and urban centres.

41. Countries should review their development strategies and incorporate into these strategies programmes which will stem the current flow of young people from the rural areas to the urban centres and ensure better living conditions in the rural areas. Measures should also be taken to upgrade living conditions in slum areas of cities.

42. Governments should revitalize rural economies and provide in rural areas socio-economic services which stimulate and sustain balanced and self-reliant development particularly for handicraft and small-scale agro-industries.

43. Governments should take appropriate measures to protect and assist international migrants and refugees and safeguard their property and respect their culture.

44. Governments should consult each other to find solutions to the refugee problem through the elimination of all forms of foreign, racial and colonial domination.

45. Governments should mount an international information campaign to alert the world on the refugee problem and mobilize additional financial resources for refugee programmes.

46. Countries affected by natural disasters such as drought and cyclones and acute problems of food shortage should assess seriously these problems and institute appropriate strategies and policies to combat them.

Changing role of women in the development process

47. Countries should recognize the role of women as mothers and workers in all sectors of the economy and provide day-care centres for mothers.

48. Governments should ensure that rural populations have easy access to modern agricultural technology and equal opportunities to use credit and other resources-generating facilities.

49. Governments should recognize the importance and changing role of women as mothers and workers in all sectors of the economy.

50. Governments should pursue more aggressively action programmes aimed at improving and protecting the legal rights and status of women.

51. Governments should introduce programmes designed to reduce the heavy burden of the rural women. Such programmes should include the introduction of labour-saving technology in agriculture, industry and domestic work.

52. Countries which have not done so should introduce programmes that will guarantee equal opportunity between the sexes in education, employment, housing and business.

53. Governments should strengthen national research institutions which study problems related to the integration of women in the process of development and enact appropriate legislation.

54. Governments should promote education for women especially and provide special population education and information programmes in the areas of fertility, mortality and high risk pregnancies.

55. Special studies should be undertaken to rid African societies of traditional practices which are detrimental to women's economic, social and cultural advancement.

56. Governments which have not so far signed and ratified the Convention of the Elimination of Discrimination against Women are urged to do so.

57. Governments should strengthen programmes designed to foster women's economic independence. Such programmes should facilitate access to credit for women especially those in rural areas.

58. Governments should take measures to improve information on women which will reflect their real contribution to economic development.

Children and youth

59. Governments should expand educational and vocational training facilities which will provide for the youth of both sexes better preparation for an economically more active life.

60. Governments should develop special programmes for the high number of school drop-outs who contribute to high unemployment and rising delinquency and crimes in urban and rural areas. Continuing programmes for these groups should focus on practical and technical training that provide ample opportunities for gainful employment.

61. Governments should institute viable programmes to reduce infant and childhood mortality and improve the conditions of children and youth, especially in rural areas.

62. Governments are urged to celebrate International Youth Year (IYY) in order to highlight problems of youth and seek solutions for them in compliance with the planned United Nations declaration of IYY in 1985.

63. Population and family life education should be incorporated into formal and vocational training to assist young people to prepare themselves for responsible parenthood.

64. Governments are urged to introduce appropriate legislation to help improve the rights of children and thereby help to control all forms of child exploitation, neglect and abuse.

65. Programmes developed to meet the needs of the youth should take cognisance of the dominance of this group in the total population and provide adequate resources to provide opportunities to a majority of this group.

Population data collection, analysis, training and research

66. African Governments should undertake regular programmes of conducting population censuses at least once every ten years.

67. Governments are requested to give priority attention to all preparatory census activities so as to avoid problems of controversy over census results.

68. Governments should devote greater effort towards fuller and more timely analysis and interpretation of census and survey data for economic and social development planning

69. Governments should consider as an area of priority the improvement of vital registration systems and the introduction of innovations in the collection systems which ensure total coverage of the population in the shortest possible time. Measures should be taken to ensure timely processing and analysis of these data.

70. Governments are urged to intensify their efforts to process, analyse and utilize health statistics for planning and programme implementation.

71. Particular efforts should be made at the national level to improve the compilation, processing, analysis and utilization of statistics from the service delivery systems and other population programmes.

72. Governments should encourage, support and utilize research on population and development and should seek to strengthen national capabilities in these areas by utilizing available training facilities in the region and elsewhere for manpower development in this area.

73. Governments are invited to give sufficient financial, material and moral support to the regional and inter-regional demographic training institutes to enable them to carry out their duties efficiently.

74. Governments should conduct periodic training workshops in the use of demographic data on specific aspects of population for planners, policy-makers, research experts and population programme officers.

75. Governments should promote and encourage all demographic research work to reflect areas of national concern.

76. Particular efforts should be made to intensify social and action-oriented research in countries of the region.

77. Governments should ensure the integration of national experts on population in national agencies responsible for formulating, implementing and evaluating of population and development policies, programmes and projects.

Population information

78. Countries should develop appropriate mechnisms for disseminating available demographic data to researchers, policy-makers, project officers and the general public. Countries should ensure that available demographic data are summarized and presented in forms that are easily understood by all sections of the population. Countries should strive to set up population information networks which provide an empirical base for project formulation, implementation and evaluation.

79. Countries should give priority attention to training experts in population information and dissemination. Population information dissemination activities should use all channels of communication available to reach a majority of the population effectively.

80. Countries should ensure adequate and prompt dissemination of the results of population research undertaken in each country.

81. Governments are urged to establish appropriate machinery for sex education and information dissemination programme.

Community involvement and role of private and non-governmental organizations

82. Governments are urged to give due recognition and support the contribution of private and non-governmental organizations participating in population activities in their respective countries.

83. Governments should provide guidance to such bodies to ensure that the latters' activities respond to the priority problems of the community.

84. Countries should encourage greater community participation in the formulation, implementation and evaluation of population programmes.

B. TO INTERNATIONAL ORGANIZATIONS

To regional and subregional organizations

85. Organizations of the United Nations system, especially UNFPA which plays an important role in supporting population programme in Africa, as well as other international, regional and subregional organizations concerned with population questions are urged to assist governments at their request in the implementation of this African Programme of Action.

86. The Conference urges that the responsibilities of UNFPA regarding promotion, implementation and co-ordination of population programmes be strengthened further, so as to ensure a more effective and efficient delivery of population assistance in Africa.

87. The ECA secretariat, UNFPA and other UN agencies are called upon to continue the programme of assisting African Governments in the population data collection, processing and analysis. They should also provide assistance to member States in the formulation of population policies and programmes, population information activities and the integration of population variables in development as outlined in this Programme of Action.

88. The ECA secretariat and UNFPA should expand their services of middle-level training to African countries especially where demographic expertise is particularly lacking.

89. Regional and subregional organizations within the United Nations family should collaborate more closely with ECA in the implementation of this programme in a manner that reduce duplication of efforts.

C. TO DONOR GOVERNMENTS AND AGENCIES

90. Governments and donor agencies are urged to provide more resources to UNFPA to enable it to provide increased support to national governments and to organizations of the United Nations system working in the field of population in Africa.

91. Donor governments and agencies are urged to continue to provide increased financial and technical support to African countries in their population programmes in the context of their material needs and priorities.

92. Donor governments and agencies are requested to be more flexible and timely in the allocation and management of bilateral and multilateral assistance in population.

93. Donor countries and agencies should increase their collaboration with each other in countries of the region.

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LC/NAIROBI

EVALUATION OF FAMILY PLANNING PROGRAMMES IN ECA MEMBER STATES

TABLE OF CONTENTS

		Pages	Paragraphes
I.	INTRODUCTION	1-2	1-9
II.	SOME PROBLEMS OF EVALUATION	2-5	10-21
III.	POPULATION AND FAMILY PLANNING OBJECTIVES	5-7	22-31
IV.	EVALUATION OF PROGRAMME OBJECTIVES	7-13	32-61
V.	SUMMARY AND RECOMMENDATIONS	13-14	62-68

TABLES A1 - A3

I. INTRODUCTION

1. One of the most important of the many population problems currently facing the African continent is that of rapid population growth and its impact on economic, social and technological development. This situ tion is the direct consequence of the spectacular decline in mortality over the past two decades coupled with relatively high birth and fertility rates.

2. Africa is the continent with the highest population growth rate in the world. According to the latest United Nations estimates, the population of Africa grew by three per cent per year during the period 1980-1985 while the world average was 1.7 per cent. The corresponding growth rates for the other regions were: Europe, 0.3 per cent, North America, 0.9 per cent, Asia, 1.7 per cent, Latin America, 2.3 per cent, and Oceania, 1.5 per cent. 1/

3. Africa has high motality and morbidity rates. Life expectancy at birth has certainly increased from 37.3 years in 1950-1955 to 48.6 years in 1975-1980. These figures, however, show a level of mortality which is relatively still high when compared to the fact that life expectancy at birth was 73 years in Europe during the period 1975-1980 and 55.1 years for developing countries as a whole during the same period. The rates of maternal and childhood mortality are still high in Africa. Health facilities are concentrated in urban areas to the detriment of rural areas where the bulk of the population lives. Infectious diseases, parasites and malnutrition remain the main causes of death.

4. The relatively high birth rate on the continent is reflected by a crude birth rate of 46 per 1000 during the period 1980-1985 compared to that recorded for developing countries as a whole (34-41 per 1000). East Africa and West Africa have the highest birth rates (49 per 1000), followed by Central Africa (45 per 1000), North Africa (42 per 1000) and Southern Africa (40 per 1000). 2/

5. Possible solutions to these problems have touched off considerable controversy and the debate focussed on whether it was better to promote economic or demographic solutions.

6. The Second African Population Conference (Arusha 1984) and the International Conference on Population (Mexico City 1984) showed, however, that this debate was now quite outdated. In the Kilimanjaro Programme of Action for African Population and Self-Reliant Development adopted at Arusha African countries recognized that the rapid rate of population growth in recent years and the stresses and strains which this increasingly imposes on African Governments' development efforts posed a problem. Recommendation 23 of the Kilimanjaro Programmes of Action requests African Governments to ensure the availability and accessibility of family planning services to all couples or individuals seeking such services freely or at subsidized prices.

1/ United Nations, World Population Prospects, Estimates and Projections as assessed in 1982, New York, 1985.

2/ United Nations, op.cit.

7. The variety of economic and political systems in Africa has inevitably to divergent positions with respect to population policies and programmes and consequently a variety of strategies for designing and implementing such policies and programmes.

8. The five countries covered by the study have all opted for policies of direct government intervention through the implementation of family planning programmes. The programmes were officially launched in 1964 in Tunisia, 1966 in Egypt, 1967 in Kenya and Morocco and 1969 in Ghana.

9. The family planning programmes could be assessed simply by finding out whether they are attaining their objectives and, if not, the reasons why they are not doing so. However, the question of assessment raises a number of problems.

II. SOME PROBLEMS OF EVALUATION

10. The main theoretical questions posed by the evaluation of population programmes include the selection of evaluation criteria and the distinction that has to be made between the effects of the programmes and non-programme influences.

2.1 The selection of evaluation criteria

11. When it comes to carrying out a comparative study on the achievements of various national programmes, it becomes difficult to select evaluation criteria because the programmes do not have uniform objectives which could be used as a basis of agreement on the most decisive criteria.

12. The most commonly used evaluation criteria can be classified into three main categories based on the classification of Lapham and Mouldin. 3/ The three main criteria are statistical, programmatic and socio-economic.

(a) Statistical criteria

Statistical criteria are used to assess family planning objectives and population trends. In this case the widest range of quantitative measures and reliable chronological series providing frames of reference over time would have to be made available. It is, however, important to be able to determine the degree to which the changes observed are attributable to the programmes.

(b) Programmatic criteria

Such criteria which are not very easy to quantify make it possible to determine to what extent family planning programmes are supported by the public authorities. It is then assumed that the determination to support family planning programmes could make them successful while the lack of such determination would explain, to a large extent, the poor achievements.

3/ Robert J. Lapham and W. Parker Mouldin - "Une evaluation des programmes nationaux de planning familial." O.C.D.E., 1972.

(c) Social and economic criteria

The use of social and economic criteria is based on the idea that the social and economic setting in which population programmes are implemented is generally related to fertility decline. Fertility changes result from varying combination of many factors - social, economic, cultural, religious and demographic.

2.2 Differentiating between the effects of family planning programmes and the effects of other factors

13. The methodological problems involved in making the necessary distinction between the effects of family planning programmes and those of other factors have still not been resolved and even if they are solved theoretically, it will be difficult to apply the solutions in countries that have incomplete data.

14. The United Nations has suggested a classification of methods for measuring family planning programme impact on fertility and we will briefly present the following: standardization approach, trend analysis; expertimental designs; couple of years of protection, regression analysis; and simulation models. 4/

(a) Standardization approach

The approach requires two steps. The first step consists in measuring fertility at two points in time to determine whether any change has occurred. The second step consists in trying to account for the observed change, if any, by standardizing for various non-programme components.

(b) Trend analysis

Trend analysis is used to estimate, on the basis of reasonable assumptions, how fertility would have evolved had the family-planning programme not been undertaken. This potential trend is then compared with the actual trend and an attempt can be made to interprete the difference between the two trends.

(c) Experimental designs

The experimental-design approach compares two groups of population: the 'experimental group' covered by the programme and 'control group' which is assumed to have the same characteristics as the experimental group except that it is not covered by the programme.

4/ United Nations - Methods of Measuring the Impact of Family Planning Programmes on Fertility: Problems and Issues, Population Studies, No. 61, 1978, ST/ESA/ESA/SER.A/61.

(d) Couple years of protection (CYP)

The couple years of protection index (cyp) is used to assess the impact of the programme in a given period. The CYP number of each contraceptive method used is calculated and then the total is added up. From the foregoing, the number of births averted can be calculated on the basis of the equation 1 CYP = n births averted (n changes according to the country).

(e) Regression analysis

The method consists in determining an equation or system of equations where the dependent variable is a fertility indicator and the independent variables are programme and non-programme factors. Through such a functional model an attempt can be made to calculate the weight of the various independent variables in explaining differences in the dependent variable.

15. The problem of selecting methods should normally be settled when one wants to assess a specific programme. The methods are not mutually exclusive; several selection criteria could be used such as: evaluation objectives; the target population; availability of data; the independence of the method and the cost of the method.

16. This brief review of evaluation criteria and methods shows that the problem of assessment is still complicated. In developing countries in general and in African countries in particular, it is often impossible to secure the data required to include all the relevant criteria or to select the most appropriate method.

17. With respect to evaluation criteria, statistical criteria will mainly be used for the following three reasons:

(a) the main drawback of programmatic criteria is that they are too subjective to be applied to other criteria;

(b) to use economic and social criteria, the problem of determining economic and social thresholds has to be solved beforehand. This problem is all the more difficult to solve because the social and economic conditions in which population dynamics occur differ from country to country;

(c) The use of statistical criteria is facilitated by the availability in the countries studied of data from national fertility surveys carried out under the World Fertility Survey.

18. With respect to methods to measure the impact of family planning programmes on fertility, the main reason why we prefer not to use them in the following evaluation is because the exercise can be carried out in only two countries, Tunisia and Egypt; the data required are not available in the other three countries. The evaluation of population trends will therefore be limited by the fact that no attempt will be made to differentiate between programme and non-programme factors affecting fertility.

19. The approach which will be used will consist mainly of comparing population objectives and family planning objectives with the results obtained from national surveys on fertility. Such surveys were implemented in 1977-78 in Kenya, in 1978 in Tunisia, in 1979-80 in Ghana and Morocco and in 1980 in Egypt. The advantage of these surveys is that not only are the results representative at the national level but also basic concepts are perfectly comparable from country to country.

20. The results of these surveys will make it possible to evaluate some family planning targets (knowledge and practice of contraceptive methods by women of a child-bearing age, the desire to have more children, desired family size, and to evaluate the main population objectives (population growth, birth, fertility and mortality trends).

21. Let us now present very briefly the main population and family planning objectives of the various programmes.

III. POPULATION AND FAMILY PLANNING OBJECTIVES

3.1 Egypt

22. The aim of the ten-year family planning programme (1968-1978) was to reduce the birth rate by a point each year so that the crude birth rate would be 30 per 1000 in 1978 which brought the natural growth rate to about 1.7 per cent during the same period.

23. The new objectives of the population policy inaugurated in 1973 were the following:

(a) To reduce the population growth rate from 2.6 per cent in 1973 to 1.06 per cent in 1982;

(b) To reduce the crude birth rate from 33.7 per 1000 in 1973 to 23.6 per 1000 in 1982;

(c) To ensure that in future the crude death rate would not be above the rate of 13 per 1000 observed in 1973;

(d) To ensure that the population remained at 41 million in 1982;

(e) To reduce the legitimate fertility rate from 236 per 1000 in 1972 to 160 per 1000 in 1982 - a reduction of 7.6 per cent per year;

(f) To increase the rate of protection through contraception in 1982 to 25 per cent of the rural population and 35 per cent of the urban population.

3.2 Ghana

24. The programme adopted in 1970 often contained very general objectives. The only quantitative objectives were the following:

(a) Achieving in the long run a decline in the population growth rate from 3.9 per cent in 1970 to 1.7 per cent by the year 2000;

(b) Reducing the total fertility rate to four in the year 2000;

(c) Achieving a rate of protection through contraception of 10 per cent between 1970 and 1975.

3.3. Kenya

25. Kenya's 1972-1976 five-year family planning programme had the following targets.

(a) Reducing the crude-birth rate from 48 per 1000 in 1974 to 43 per 1000 in 1979 by getting 640,000 people to use methods of contraception;

(b) Reducing the infant mortality rate by 30 per cent and the juvenile mortality rate by 50 per cent;

(c) Reducing the population growth rate from 3.5 per cent in 1972 to 3.25 per cent in 1979,

(e) In the long run, achieving a more drastic reduction in the population growth rate: 3 per cent in 1980 and 2.8 per cent in the year 2000 and thus reducing the total fertility rate to 4.7 in the year 2000.

3.4 Morocco

26. The national family planning programme established in 1967 had only one quantitative objective stated in the 1968-1972 development plan, namely: to reduce the crude-birth rate from 50 per 1000 in 1968 to 45 per 1000 in 1972 and then to 35 per 1000 in 1985.

27. In the 1981-1985 development programme, the Ministry of Public Health set itself another quantitative objective of attaining a prevalency rate of 24 per cent in 1985.

3.5 Tunisia

28. The programme adopted in 1966 had the following targets:

(a) Reducing the crude birth rate from 46 per 1000 in 1966 to 36 per 1000 in 1971 and then to 34 per 1000 in 1975;

(b) Achieving a prevalency rate of 40 per cent for women between 20 and 40 years of age.

29. The National Family Planning and Population Board established in 1973 adopted a three year programme with the following quantified objectives:

(a) Reducing, by the year 2000, the age-group fertility rates of Tunisia to the same level as those observed in 1970 in Italy,

(b) Reducing the population growth rate from 1.8 per cent in the period 1971-1976 to 1.1 per cent in the period 1996-2001.

30. The medium-term objectives of the Fifth Development Plan (1977-1981) were the following:

(a) Bringing about a decline in the birth rate from 35.3 per 1000 in 1976 to 32.3 per 1000 at the end of the Plan (1981) then to 29.9 per 1000 in 1986;

(b) Reducing the fertility rate from 155.1 per 1000 in 1976 to 135.3 per 1000 in 1981 then to 120 per 1000 in 1986.

31. The aim of the Sixth Plan (1982-1986) is to achieve an increase in the rate of contaceptive usage from 27 per cent in 1980 to 40 per cent in 1986.

IV. EVALUATION OF PROGRAMME OBJECTIVES

4.1 Evaluation of family planning objectives

4.1.1 Women and family planning

32. Table 1 shows that the percentage of ever-married women who indicated having any knowledge of contraceptive methods varies between 69 per cent in Ghana and 95 per cent in Tunisia. Data classified by age show that in all the countries concerned, women who are between 25 and 34 years of age are the ones who know contraception best. These results show the emphasis and direction that should be given to the campaign to make women aware of the use of contraceptions especially in Ghana and to a lesser extent in Morocco.

33. With respect to knowledge of and access to family planning guidance facilities, the following findings generated by national fertility surveys indicate once more that official family planning campaigns still do not have enough impact in some of the countries studied.

34. In Ghana, 66 per cent of the ever-married women did not have any source of information on family planning at the time of the survey. The percentage observed in Kenya was 58 per cent in 1977-78. In 1978-79, there were only five per cent of the ever-married women who had been to family planning guidance offices in Ghana while in Kenya that percentage was 12 per cent in 1977-78.

35. In Morocco and Egypt, the percentages of women who did not know of any sources of supply of contraceptive methods were 18 per cent and 25 per cent respectively.

36. Knowledge of contraceptive methods does not automatically lead to the use of contraceptives. The findings of the surveys on fertility make it possible to compare the results obtained with respect to family planning for various categories of women with the initial objectives.

Table 1. Percentage of age specific ever-married women who have heard about contraceptive methods

Countries	Current age				Total
	25	25-34	35-44	45+	
Egypt	85	92	91	89	90
Ghana	70	72	67	62	69
Kenya	91	92	92	88	91
Morocco	81	86	88	84	84
Tunisia	93	97	96	92	95

Source. National fertility surveys

37. In Egypt, the target of attaining a rate of protection through contraception of 35 per cent in urban areas in 1982 had already been exceeded by 1980 when a rate of 52 per cent was achieved. However, the prevalency rate of 16 per cent observed in rural areas during the same year indicates that it will be almost impossible to attain the expected target of 25 per cent in 1982.

38. In Ghana, the objective of insuring that by 1975, 10 per cent of the women of a child-bearing age will use contraception does not appear to have been attained either since in 1979-80 only six per cent of married and fertile women used modern contraceptive methods.

39. Morocco and Tunisia appear, on the other hand, to have attained their objective in this respect. Indeed, although the results of the fertility survey in Morocco indicate that the rate attained in 1979-80 was 19 per cent, the preliminary results of the 1983-84 national survey on contraceptive prevalence give on the other hand a prevalency rate of 25.5 per cent at the end of 1983. Thus, the objective of 24 per cent in 1985 had already been exceeded as early as 1983. The same thing happened in Tunisia where the EPS-ONPFP survey of 1983 showed that the prevalence rate attained a very appreciable level in 1983, i.e. 41 per cent of the level expected under the 6th plan for 1986.

40. The most popular contraceptive methods are the pill (Egypt, Ghana, Kenya, Morocco) and the Intra-Uterine Device (Tunisia).

41. To sum up, Tunisia is the only one of the five countries covered by the study where the prevalence rate appears to be sufficient to influence population trends. Indeed, it has been demonstrated that to alter such trends appreciably, more than 33 per cent of married women of child-bearing age should use contraception.

4.1.2 Women and the number of children desired

42. Table A 1 in the annex on the average number of children desired by married women shows that Ghanaian and Kenyan women still desire large families. Thus, the ideal size of the family desired by the women was at the time of the survey, seven children in Kenya and six in Ghana while it was five in Morocco and four in Egypt and Tunisia.

43. Moreover, generally speaking, the Ghanaian and Kenyan women still wanted on the average more children than the number of living children they had when the survey was carried out.

44. This shows the slight impact of the sensitization campaigns in Kenya and in Ghana despite the fact that from the very outset, the family planning programme in the two countries stressed the reduction of family size and the importance of spacing births.

4.2 Evaluation of population objectives

4.2.1 Population growth

45 The data presented in Table 2 make it possible to follow the changes in the rate of population growth as observed during the last two decades in each of the countries.

Table 2. Annual mean inter-censal growth rate (%)

Egypt		Ghana		Kenya		Morocco		Tunisia	
Year	Rate	Year	Rate	Year	Rate	Year	Rate	Year	Rate
1960	2.3	1960	2.7	1962	3.0	1960	2.5	1956	1.7
1966	2.4	1970	3.0	1969	3.3	1971	2.6	1966	1.8
1976	2.4	1980	3.2	1979	3.9	1982	2.6	1975	2.3
1982	2.8			1980	4.0			1980	2.7

Source: Egypt, Ghana, Tunisia: National fertility surveys (Vol. I)
Kenya: Integrated Rural Helth and Family Planning Project. Plan of Implementation, 1983, p.4.
Ghana: National Seminar on Population, Employment and Development, 1977, p. 16.

46. It can be seen that, contrary to the objective persued, the population has grown everywhere at increasingly higher rates. Several explanations have been given to this. 5/

47. In Morocco and Ghana the decline in mortality is accompanied by high levels of fertility. In addition, in Ghana the increase in population has been attributed in part to immigration. In Kenya, the accelerated population growth is thought to be due to the fact that the decrease in mortality has been accompanied by a rise in fertility. In Tunisia, the trend observed is thought to be due to the spectacular decrease in ortality which is declining faster than the decline in fertility. In Egypt, the increase in the population growth rate over the last few years is thought to be attributable to the baby bulge" after the wars especially that of 1967. This, coupled with the decline in mortality, contributed to the rise in the population growth rate.

4.2.2 Birth rate and fertility

4.2.2.1 Birth rate

All the countries studied except Ghana had a quantified objective of reducing their birth rates. But the data observed in Table A 2 in the annex to this document show that only Morocco and Tunisia are near to attaining these objectives. However, the success achieved with respect to bringing about a decline in the birth rate in Morocco could be attributed to the fact that Morocco's objectives were realistic.

48. It can thus be observed that the birth rate decreased in Egypt from 40 per 1000 in the 1960s to 34 per 1000 in 1972 but since then it has climbed steadily back to about 40 per 1000 once again. This trend shows that the objective of reducing the birth rate by a point every year was not achieved, thus, the projected target in 1982 of 23.6 per 1000 was not attained. The same thing happened in Kenya where the programme did not achieve a reduction in the crude birth rate from 48 per 1000 in 1974 to 43 per 1000 in 1979. The rate observed in 1979 was 53 per 1000.

49. In Tunisia, the downward trend in the crude birth rate has continued steadily since 1960. Yet, it was only from 1970 onwards that the rate dropped below 40 per 1000 to gradually attain 34.1 per 1000 in 1978, and thus make it possible to attain the target of 32.3 per 1000 in 1981.

4.2.2.2 Fertility

Each of the countries attempted, through its programme, to considerably reduce the fertility of couples and only Morocco did not have a quantified objective in that respect.

50. Table A 3 in the annex, which shows age-specific fertility rates at maternity for five-year periods makes it possible to follow fertility trends. These rates were calculated from maternity history data collected during the national fertility surveys. 6/

5/ See first analysis reports of the national fertility surveys.

6/ For details on the calculations, see. Brass, W. (1978) "Screening Procedures for detecting Errors in Maternity History Data," WFS/TECH 810, London.

51. The general impression given by Table A 3 is that there has been a recent decline in general fertility in each of the countries. It should, however, be emphasized that these retrospective estimates are sensitive to omissions and mis-dating of events and could thus distort the actual fertility trend.

52. If the empty spaces of Table A 3 are completed by the rates corresponding to same age in the adjacent periods, a total fertility series is obtained for each country.

53. The decline in fertility in Egypt was initially caused by rising age at marriage and this was followed by a period in which the proportion of married women and the rates of legitimate fertility both declined. 7/ The target of reducing the rate of legitimate fertility to 160 per 1000 in 1982 was however not attained because according to the findings of the fertility survey that rate was 241 per 1000 in 1980.

54. In Ghana, total fertility remained stable at around seven children until 1970 and then started to decline slightly from 6.97 to 6.47. The cohort rates per period do not appear to reflect such a trend and tend rather to indicate that fertility has remained stable in which case the impact of the population programme on fertility would be negligible. The same conclusion could be drawn in Kenya where the data indicate extremely high fertility levels. The estimated total fertility rates were 8.3, 8.9, 9.2 and 8.5 for the period 0-4, 5-9, 10-14 and 15-19 years prior to the survey, respectively. The impression of an increase in fertility up until the mid-1960s, followed by a decline is almost certainly a reflection of errors rather than genuine trends. 8/ Whatever the case might be, it would be very difficult to decrease by half total fertility which was as high as 8.3 in 1974-78 within a period of 20 years to 4.7 in the year 2000.

55. In Morocco, the objective of bringing about a decline in fertility seems to have started achieving a measure of success only in the recent past, i.e., during the period 1975-1979 when total fertility was 5.9 children compared to 6.9 children during the period 1970-1974. The decline in fertility was mainly among child-bearing women of between 15 and 25 years of age. As in the case of Egypt, this was probably caused by rising age at first marriage of the youngest generations and a decline in legitimate fertility after the age of 30. These two factors combined to bring about a considerable decline in overall fertility during the 1975-1979 period. 9/

56. In Tunisia a steady decline in fertility was observed during the two decades prior to the survey, i.e. since 1958. Here, the decline in fertility could be attributed in particular during the last fifteen years to joint action to raise the marriage age and to the use of contraception which was considerably developed during those years. 10/

7/ The Egyptian fertility survey, volume II, page 47.

8/ Kenya fertility survey, volume I, page 91

9/ National fertility and family planning survey in Morocco, 1979-1980, Vol. III, page 30.

10/ Tunisian fertility survey 1978, Vol. I, page 11.

The objective of attaining a general decline in fertility stated in the Fifth Development Plan could be said to have been achieved in 1981. Indeed, the objective was to reduce general fertility to 135 per 1000 in 1981; the fertility survey puts that index at 143 per 1000 for the period 1974-1978 while the estimates of the National Institute of Statistics put it at 149 per 1000 for 1978. The past trend of overall fertility rate could be used to support the assumption that the target rate for 1981 has been atained; that rate which was estimated at 200 per 1000 in the mid-1960s fell to 170 per 1000 and then to 148 per 1000 in 1978. Finally, although it is still too early to assess the long-term objective of attaining, by the year 2001, the age-specific fertility rates observed in Italy in 1970, the table below shows changes in the fertility rate in Tunisia since 1966.

Table 3. Changes in total fertility rates in Tunisia

Age Group	General fertility rates			Objective 2001 Rates Italy 1970
	1966	1971	1976	
15-19	73	46	39	22
20-24	296	273	201	104
25-29	350	321	295	156
30-34	316	287	232	108
35-39	236	214	190	98
40-44	114	102	95	18
45-49	31	30	25	2

Source: Tunisia, INS, Perspectives d'evolution de la population, 1971-2001.

57. A look at this table shows a steady decline in fertility rates at all ages between 1966 and 1976. Given the considerable decline in fertility during that decade, it could be hoped that if the trend continues at the same rate, the objective for 2001 could be attained within 25 years.

4.2.3 Mortality

Obviously, all the programmes stressed the need to bring about a rapid decline in mortality especially infant mortality. Only Kenya and Egypt, however, had quantified objectives.

58. As in all developing countries, the countries covered by the study recorded a very rapid decline in mortality rates during the past three decades through an improvement in health facilities, mass hygiene campaigns to combat endemic diseases. The data shown in Table A 2 give an idea of the extent of decline in mortality.

59. In Egypt, the general rates of mortality declined from 25 per 1000 during the 1940s to 19 per 1000 during the 1950s and then to 10 per 1000 in the early 1980s. The objective for 1978 was attained in 1973 because since then the crude mortality rate has been below 13 per 1000 (Table A 3).

60. Table 4, which shows infant and child death probabilities, confirms the steady and pronounced decline in child mortality over the past 20 years in conformity with the programmes' objectives. However, as it was stated earlier on, only Kenya quantified its objectives, i.e. a 50 per cent reduction in child mortality and 40 per cent reduction in infant mortality during the period 1972-79.

61. In 1977, the rate of infant mortality was 83 per 1000 in Kenya, as against a rate of 119 per 1000 given by the 1969 census. This matches the decline of 30 per cent envisaged by the programme; such a decline was also achieved in 9 years even though the periods of reference are slightly different. With respect to child mortality, the decline achieved over the past 10 years does not permit us to affirm that the objective of reducing mortality by 50 per cent has been attained.

Table 4. Infant and Child Mortality for five-year periods

Countries	Infant Mortality (years before survey)				Child Mortality (years before survey)			
	0-4	5-9	10-14	15-19	0-4	5-9	10-14	15-19
Egypt	132	146	141	161	191	238	243	283
Ghana	70	67	78	79	118	148	145	172
Kenya	83	88	96	121	139	148	157	196
Morocco	81	102	103	121	142	161	180	207
Tunisia	80	75	78	110	107	130	140	194

Source: National fertility surveys

V. SUMMARY AND RECOMMENDATIONS

62. One of the objectives of this paper was to focus the attention of African officials responsible for population programmes on the problems of evaluation.

63. We have seen that one of the main problems lay in selecting the most appropriate evaluation criteria and methods from the wide range available. There are a number of shortcomings such as the lack of reliable data and comprehensive chronological series and the lack of thorough investigations to pinpoint the impact of the programmes.

64. The evaluation structure that we have suggested is mainly based on the availability and comparability of data generated by national fertility surveys carried out within the framework of the World Fertility Survey. It was therefore a question of evaluating population and family planning programme objectives using the data generated by the national fertility surveys.

65. The limits of such an approach are quite obvious, but it enabled us to show that certain solutions could always be envisaged to make up for the lack of data required in selecting and implementing evaluation criteria and methods.

66. From the results obtained, it appeared that the impact of family planning programmes was relatively low in four of the five countries studied, namely Egypt,

Ghana, Kenya and Morocco. The case of Tunisia could be explained by the fact that the country's population policy is not only clear and well planned but it is also backed by relevant legislation and by political will at the highest level.

67. There are many reasons for the failure or poor performance of the programmes. The failure could be due to: the fact that the objectives were not clearly defined, inadequate financial, material and human resources; the poor motivation of the target population; the inadequacy of the evaluation, etc.

68. We, therefore, propose the following recommendations to improve the efficiency of the programmes:

(a) Improving knowledge of demography in the countries by promoting particularly the collection and analysis of data and training demographers and specialists in family planning;

(b) Defining more accurate family planning programme objectives by carrying out a realistic assessment of the requirements and demands of the target population;

(c) Establishing an autonomous executing agency for the programmes especially with respect to programme management;

(d) Providing consistent support to programmes at the highest political level;

(e) Encouraging governments to provide more consistent financial to the programmes;

(f) Ensuring the legislation plays a catalytic role and given the programmes a crucial legal framework;

(g) Developing a meaningful policy on information and incentives and a population education programme for the target populations, socio-professional categories and specific risk groups;

(h) Creating and developing genuine research and evaluation units within the programme implementation agencies;

(i) Promoting horizontal cooperation through the exchange of information and experiences among countries.

Table A1: Mean number of children desired by currently married women, by current age, duration since first marriage and number of living children

Countries	Current age							
	20	20-24	25-29	30-34	35-39	40-44	45-46	Total
Egypt	4,3	3,9	3,7	4,1	4,4	4,5	4,6	4,1
Ghana	5,2	5,2	5,5	6,3	6,9	7,2	7,3	6,1
Kenya	6,6	6,4	6,8	7,3	8,1	8,2	8,7	7,3
Morocco	4,3	4,4	4,6	5,0	5,4	5,6	6,1	5,0
Tunisia	3,7	3,7	3,9	4,2	4,4	4,5	4,4	4,2

	Years since first marriage						
	5	5-9	10-14	15-19	20-24	25-29	30 +
Egypt	3,6	4,0	4,1	4,2	4,7	4,8	4,8
Ghana	5,0	5,4	6,0	6,6	7,2	7,7	7,7
Kenya	6,3	6,6	7,3	7,7	8,3	8,8	8,6
Morocco	4,1	4,4	5,0	5,3	5,5	5,8	6,0
Tunisia	3,6	4,0	4,2	4,4	4,6	4,6	4,5

	Number of living children									
	0	1	2	3	4	5	6	7	8	9 +
Egypt	3,8	3,5	3,8	3,9	4,2	4,6	4,7	5,2	5,4	5,7
Ghana	5,3	5,0	5,3	5,7	6,2	6,9	7,4	8,0	8,9	9,9
Kenya	6,2	6,4	6,6	6,8	7.0	7,3	8,1	8,3	9.0	10,2
Morocco	4,2	4,1	4,2	4,5	5,1	5,2	5,2	6,1	6,5	6,7
Tunisia	3,7	3,4	3,6	3,8	4,3	4,7	4,7	4,7	5,0	4,8

Source: National fertility surveys

Table A2: Evolution of crude birth rates and crude death rates

	Crude birth rates					Crude death rates				
Year	Egypt	Kenya	Morocco	Tunisia	Year	Egypt	Ghana	Kenya	Morocco	Tunisia
1962	41,5	50	46,1	45,0	1962	17,9	23	20	19	
1963	43,0			43,0	1963	15,5				
1964	42,3			46,0	1964	15,7				
1965	42,7			44,0	1965	14,1				
1966	41,2			45,1	1966	15,9				16
1967	38,9			41,9	1967	14,2				
1968	37,9			41,1	1968	16,0				
1969	36,8	50		41,7	1969	14,4	20	17		
1970	35,0	)		38,8	1970	15,1				
1971	35,0	)		36,6	1971	13,1	18	)		
1972	34,3	)	46,8	39,0	1972	14,4		)		15
1973	35,7	)		36,9	1973	13,0		)		
1974	35,6	48)		35,6	1974	12,6		13)		
1975	36,0	)		36,6	1975	12,1		)		
1976	36,4			36,1	1976	11,7		)	15	
1977	37,3	54		37,2	1977	11,8		14)		
1978	37,3			34,1	1978	10,4		)		
1979	39,8	53		34,0	1979	10,8		14)		
1980	40,8			35,0	1980	10,4		)		8,8
1981	41,8				1981	10,2		)		
1982	36,9		38		1982	10,3		)		

Source: National fertility surveys

Table A3: Age-specific fertility rates (p.1000) by age at maternity and by five-year periods

Countries	Age at Maternity	Period (years before survey) 0-4	5-9	10-14	15-19	20-24	25-29	30-34
Egypt	15-19	99,3	122,0	164,3	197,0	205,5	199,2	176,6+
	20-24	255,5	267,7	324,8	349,8	325,8	366,8+	
	25-29	235,2	280,5	320,0	326,6		347,8+	
	30-34	217,4	220,9	251,0	297,0+			
	35-39	130,5	134,3	165,3+				
	40-44	48,2	66,0+					
	45-49	15,5+						
Total fertility rate		5,47	5,53	6,53	7,09			
Ghana	15-19	136	141	134	148	150	120	112+
	20-24	255	268	269	268	249	263+	
	25-29	276	281	295	281	292+		
	30-34	245	266	272	286+			
	35-39	188	211	245+				
	40-44	132	166+					
	45-49	61+						
Total fertility rate		6,47	6,97	7,21	7,27			
Kenya	15-19	178	158	209	210	177	163	118+
	20-24	345	356	379	320	303	300+	
	25-29	357	362	361	317	316+		
	30-34	297	328	352	322+			
	35-39	244	277	273+				
	40-44	164	166+					
	45-49	68+						
Total fertility rate		8,3	8,8	9,2	8,5			
Morocco	15-19	93	133	161	205	209	191	170+
	20-24	265	306	323	330	331	329+	
	25-29	296	328	328	320	339+		
	30-34	222	274	265	267+			
	35-39	170	197	209+				
	40-44	98	104+					
	45-49	29+						
Total fertility rate		5,9	6,9	7,1	7,3			
Tunisia	15-19	34	50	97	118	123	96	79+
	20-24	225	226	307	293	282	255+	
	25-29	304	323	340	337	350+		
	30-34	261	264	314	355+			
	35-39	199	212	233+				
	40-44	112	113+					
	45-49	37+						
Total fertility rate		5,8	6,2	7,1				

Source: National Fertility Surveys (Vol.I). + Incomplet cohorts.

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ISSUES IN THE DISSEMINATION OF INFORMATION FOR ECONOMIC DEVELOPMENT PLANNING

Issues in the Dissemination of Information for Economic Development Planning

I. Introduction

The emerging advanced information systems and the structural changes taking place in many developing countries are signalling the "coming of the information society". These events are focussing attention on the role which information activities can play in modern economic development and subsequently on the need to create appropriate institutions for the transfer of information. In particular, the dissemination of scientific and technological information is being conceived of as a vital element in promoting the technological change so crucial to economic growth. For this reason, advanced systems for information retrieval utilising large-scale data-bases are being set up in developing countries primarily for the purpose of serving users.

Developing countries are now finding themselves in a situation where the importance of information as a resource for technological development must be recognized, but simultaneously with a feeling that the gap with regard to access to such information is constantly widening. On the one hand, this feeling is leading to a new emphasis on support to information activities as a national priority. On the other hand, the urgency of the situation is encouraging decision makers in developing countries review the current infrastructure for international as well as national flow of information, with the objective of enhancing this flow of information in mind. Finally decision-makers in developing countries are being encouraged to consider the introduction of information technology on a large scale, since such technology has become the backbone of modern information retrieval. Ideally, all three actions outlined above would do much to improve the situation of developing countries.

Needless to say, the Lagos Plan of Action, has identified information as important to the development of the African countries. It identifies the lack of information as "one of the most serious obstacles to selection, acquisition and use of appropriate technology options; an understanding of the local environment, character and orientation of the transferees is as important as information on the technology to be supplied. Care should therefore be taken to ensure that the technology supplied match the local needs identified. Machinery should be established to assess and promote the acquisition and dissemination of information on the range of alternative technologies, processes and products available for a particular application"[1] However, there is a strong tendency to focus attention on the mind of these actions - the introduction of new technology and to neglect the importance of genuine support for information activities and a critical review of the current information flow which is necessary for successful introduction of new technology.

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[1] OAU: The Lagos Plan of Action for the Economic development of Africa, 1980-2000. page 51, paragraph 154.

This paper will address some issues associated with a review of the current situation namely, the issues in the dissemination of information for development Planning. These issues These issues hamper the smooth flow of information for development, and should be addressed as soon as possible by the developing countries. In fact, it will be argued here that these issues may reduce the effectiveness of information retrevial and dissemination using new information technology consid rably, and consequently that proper attention should be given in advance to addressing these issues.

(a) Increasing Agricultural Production

Africa's needs in terms of Agricultural production is certainly increasing. One of the major problems facing the African countries is the lack of enouch food to feed their populations. There is an urgent need for improved standardized information on the following:

(i) the food situation in each country to be supplied to planners in order to ensure that they manage their resources properly.

(ii) On the best food to grow.

(iii) On the new varieties of food with high yield food value.

(iv) On the modern methods of farming.

(v) On storage systems and facilities.

(b) Protection of crops and animal health

Many African countries are engaged in crop farming and animal husbandry. Modern intensiv agriculture of high-yielding varieties brings in its train the problem of losses caused by disease and parasites. In order to avoid considerable losses of crops, information on protective systems should be made available to African countries, in order to make it possible to preserve the high yields resulting from genetic improvement and from the rational use of inputs to improve the soil.

Research information resulting from phytopathological and entomological research should be made available as well as information resulting from research into methods of protection of high quality crop varieties. In the case of animal health, information resulting from research on those diseases that cause the greatest damage should be made available.

(c) Population Activities

Dissemination of information related to population activities, e.g. control of population, mortality, fertility etc. is becoming crucial to Africa's development. Information on total population size, its composition by age and sex, geographical distribution and its socio-economic characteristics is a basis in plannning

programmes in education, health, housing, transport, industrial development projects etc. Those involved in collection and analysis of population information need to make such information available to planners, and policy makers in order to enhance the effectiveness of planning and implementation of socio-economic development. Population information dissemination would help planners and policy makers to formulate relevant population related programmes by educating them on the usefulness and benefits they would derive from such programmes. It is therefore necessary to establish the necessary mechanisms for population information dissemination which are at present lacking in most African countries.

The need for dissemination of population information for development has been expressed at a number of fora. For example, The Lagos Plan of Action has called for greater integration of population variables in development planning. Dissemination of relevant population information has a significant role in achieving this. The Parliamentary Conference on Population and Development in Africa held in Nairobi, Kenya, 4 to 5 July 1981 noted that there was a general need for population education in Africa to inform the population on the relationship between population and development. ECA Resolutions 366(XIV) of 1979 and 400(XV) of 1981 and recorded the need to expand and improve population and documentation activities. Most recently the Kilimanjaro Programme of Action on Population (KPA) has stressed the need for member States to develop appropriate mechanisms for disseminating available demographic data to policy makers, project officers, and the general public

Action taken by some member States and ECA

In a few of the member States the radio and the newspapers have been used in a systematic manner to disseminate population information. One of the common means used by a number of African governments in disseminating population information from population censuses and/or surveys has been the convening of seminars to discuss the results. Such seminars have been conducted in the recent past in Kenya, United Republic of Tanzania, Mauritius, Zambia, Republic of Cote d'Ivoire, Sierra Leone, Republic of Cameroon, Guinea (Conakry), Chad, Malawi etc. The main problem with such seminars is that they have in general been conducted at national level and hence only a few people have been involved.

The role of ECA

ECA has been involved in collection and dissemination of population information as far back as 1970 with the objective of creating and enhancing better awareness of the inter relationships between population and development through:

(i) publications such as the African Population Newsletter, Africa Population Studies series, Demographic Handbook for Africa, Case Studies on Population and development, reports on national Seminars on Population and development, etc.

(ii) Assistance to member States on organizing Seminars on population and development.

(iii) Assistance to member States in analysis of population censuses and survey data.

ECA, in order to intensify the activities in the field of population information dissemination and documentation has established Population Information Network for Africa (POPIN-AFRICA) as of January 1980. National Institutions dealing with population information have been contacted to join the network. Details on POPIN-Africa are presented in a separate paper for presentation to this conference.

Diffusion of population information is essential for socio economic development. Most governments have now realized the importance of population information. Every effort should therefore be made to improve the dissemination of population information as well as the quality of population data.

(d) Conservation and improvement of land already under cultivation and the development of new land.

There is need to encourage settled farming in some countries in Africa, and improve land already under cultivation, through the dissemination of information on soil physical features, suitability for agriculture in relation to the range of crops under consideration, fertility, and erosion control.

(e) Checking of urbanisation process

Many countries in Africa are experiencing very high rates of urbanisation. The rapid increases in urban populations has serious consequences on the urban and rural areas. To plan for urban housing, schools, jobs and roads for the urban populations, proper information is needed, e.g. on the rate of rural-urban migration, reasons for rural urban migration, urban age structures etc.

(f) Water Development for Irrigation

Information for water development is important to ensure the supply of water and the moisture retention necessary to support plant life. Properly sited research centres should be established in Africa to provide information on problems of irrigation, drainage, control of flooding and desalination. Research should be geared to the use of surface and under ground water for agricultural and livestock needs.

(g) Research development and utilisation of improved Agricultural Techniques for both traditional and new crops

The aim of such a programme is to study and adopt new and improved farming techniques for the dual purpose of increasing crop yields and reducing production costs. The rational working of tropical soils must be directed at preventing soil erosion while improving permeability, porosity and water conservation. Information on the techniques for the use of animal and motorised traction should be determined for each type of soil and for each type of crop, to avoid any action that might reduce yields. It would also be worthwhile incorporating into this programme measures for the control of parasitic plants harmful to crops. When the state of health of livestock has been brought effectively under control, the improvement of nutrition and stock farming must logically increase productivity.

(h) Import of technology from the Industrialised Nations

The productivity of countries in Africa, and the income earning opportunities associated with it depend crucially on the application of modern scientific knowledge, to the identification and generation of improved technologies and the use of technologies in the production processes. High priority should therefore be attached to scientific development and to the use of technology for the social economic development of the African Countries.

In addition to the generation of technology in Africa, a lot of technology is imported. As well as influencing the production factors and socio-cultural characteristics of countries in Africa, imported technologies have strong effect on Africa's scientific and technological potential. These influences can be advantageous or detrimental, depending on the conditions under which the import takes place. It follows that information on the following has to be disseminated:

(1) Influence of technology transfer on the overall scientific and technological development of the countries of Africa.

(2) The international patent system and its role in the transfer of technology.

(3) The transfer of operative technologies in relation to the develoment process.

(4) Links between operative technologies in relation to the development process.

(5) Policies for introduction of new technologies.

(i) Storage and Preservation of Agricultural Products

The use of new techniques in Agricultural Production will have the effect of placing the products of large harvests on the Market. This situation calls for information on crop

preservation in order to reduce, if not completely eliminate wastage at all levels. The preservation of stocks of agricultural produce will provide farmers with a fair price for their produce and eliminate periods of scarcity.

J. Africa's External Indebtedness

The external indebtedness of African countries has continued to worsen over the last few years. This is due partly to the inability of African countries to generate adequate incomes and domestic savings they have resorted to financing the difference between savings and investment and balance-of payments deficits through increased borrowing from both bilateral and private sources. Such additional loans were invariably secured at increasingly unfavourable terms and include over increasing interest-rates, particularly over the period 1979-1982. Africa's external indebtedness, which has been particularly aggravated by the adverse international economic situation, has been a matter of great concern to most African Governments.

Of interest to African countries on the question of external indebtedness is the issue of lack of information on important items, on which, information could alleviate the problem of external indebtedness. The following items require up to date processed information disseminated to policy makers and planners:

(a) Information on proper tax systems for African countries, and not the systems borrowed from former colonial administrations.

(b) Adequate information on terms under which external loans are granted and the economic returns from the programmes financed with such loans. Information on this is particularly useful on these two issues.

- Technical estimates

Feasibility studies and technical estimates carried out in many African countries are often based on practical experience of some developed countries; such experience is not necessarily relevant to African countries. That is why the manpower and management techniques of firms financed with foreign capital are not immediately adaptable to the production and management methods required in African industrial plants. Experience also shows that production costs become higher than originally planned, partly because of lack of adequate estimate to factor inputs, technology and raw materials, all of which usually imported at high prices.

Import requirements generated by the development programme

There is an inherent lack of adequate information to forecast the volume of imports required to implement a development programme, because such an exercise requires analytical tools which are not often available in African countries.

(k) Nutrition and Food Technology Research

Institutions should be established to provide specialised research information into traditional food practices with a view to improving them.

(l) Natural Resources and Energy

The above may be interpreted to include agriculture, forests, mineral and water resources, solar energy, oil energy etc. Conservation and exploitation of natural resources will require a diverse assortment of information needs and users. For example, planning Ministries need information on good agricultural practices for preparation of soil, harvesting of crops and animal husbandry. In all these situations information to be transferred and generated include:

(1) Data on the physical characteristics of the resources themselves.

(2) Data on the techniques for exploiting them ordinarily. The first type of information backed up where appropriate by international hydrological, meteorological and oceanic data. Such surveys can be carried out by domestic organizations under contract by foreign organizations if the necessary expertise is not available locally.

(m) Industrial growth and production

The Industries of the African countries are growing rapidly and production of various commodities by these industries is also growing. Manufacturing and commerce play a major role in expanding incomes and alleviating poverty. These sectors if they grow more rapidly than the economies as a whole could be important sources for the creation of income-earning opportunities for these countries and their growing labour force.

It therefore follows that countries in Africa need processed technical information for the formulation of industrial objectives and the determination of appropriate national development strategies.

As we can gather from the preceding paragrphs, dissemination of information to planners and decision makers is becoming extremely vital in the development process. However, as far as Africa is concerned, there are several issues which need to be addressed in order to effectively disseminte information for development planning. The following are some of the crucial issues.

(I) Finance

The severely limited financial means of most documentation and information centres in Africa is self-evident. The problem is made worse by the exchange control regulations of many countries and the

relatively high cost of journals, books and information services from the industrialised countries.

The access to international data bases or networks is also proving a very expensive affair. Firstly, the cost of search especially inter active searches will usually exceed the economic capabilities of individual researchers. The total cost of such database searches include both access fees of various kinds (e.g. subscription rate, hourly rate, on line or off-line print) and telecommunication costs, which in the case of most African countries requiring inter continental linkages are prohibitive.

(II) Technical

The technical issue is mostly associated with the backward levels of telecommunications technology in Africa, and the phenomenon that many international communication linkages are designed to serve users in industrialised countries. Although quite a few African countries have established one or several linkages with international satellite communications systems the local telecommunication systems are frequently fraught with technical problems. The result is that, at best, there will be one communications node in the country, but the establishment of a decentralized network for access to international communications through this mode is very difficult.

(III) Organization

The unco-ordinated piece meal development of government institutions and frequent reorganisation in many African countries, has resulted in duplication of effort and dissipation of resources. The "co-ordination of all services involved in the provision of information" as laid down in UNESCO's National Information System (NATIS) guidelines proves extremely difficult when information dissemination is the task of so many different Ministries and departments.

(IV) Personnel

One of the issues which is being discussed by many African countries is the lack of qualified information professionals in Africa. On the one hand, it appears that there has been a long-run tendency to ignore the need for educational programmes for librarians and information scientists. On the other hand, the problem appears to have been maximized by the new technologies and the key role which they play in modern information services. These advanced information technologies, especially in their present form, have been less than user friendly and the information professional thus tend to become an important source of knowledge in the user's information search.

As the importance of information sources for development purposes are becoming generally recognized in society, the need for user education will expand accordingly. Moreover, the above

mentioned introduction of information technologies also tend to raise the requirements for user education. This vital aspect of the promotion of information flow appears to be largely ignored in Africa; and therefore becomes a key issue on the effective information flow.

(V) Compatibility

This affects the use of non-specialized terminals (e.g. microcomuters) in international on-line information retrieval. Again, the problems are aggravated by the lack of digitalized networks and packet switching facilities in African countries. When a centralized node for international communications is set up with specially leased connections to international networks and special equipment, however, the problem of compatibility is naturally minimized.

VI. Legal

Most of the scientific and technological information which is generated in the formal, public research and development systems of industrialized countries is freely available to users in Africa, under the cost structure mentioned above. But a significant portion of the information which is potentially interesting to African countries are protected by various, kinds of legal provisions. One of the systems which could offer information but under strict conditions regarding propriety is the patent information system. Patents represent a rich source of technical information, but the use of this information is usually circumscribed by the need to enter into a licensing agreement with the owner of the patent.

Similarly the diffusion of information in Africa may be limited by copyright provisions. The issues of copyright has become especially significant lately precisely because of new information technologies: the access to photocopying equipment in industrialized countries tend to reduce the economic returns on commercial publishing with the result that prices on books and periodicals go up. The increased cost of printed matter has hit the African countries very hard and local possibilities of extensive photocoping do not appear within reach at present. Copyright is also having a negative influence on the international flow of information from the view point of African countries in the sense that much of the information which is important and which occasionally originate in Africa itself (e.g. scientific articles, abstracts, data on ecological structures etc.). May in fact be issued by various private or public institutions in industrialized countries, and subsequently protected by copyright provisions from widespread dissemination in Africa.

VII. Political

Due to the situation where an apparently increasing number of information sources are considered strategically important for national defense or economic interests, these information items tend

to become increasingly difficult to access from Africa. One aspect of this trend is that growing political tension between superpowers promotes a more widespread use of secrecy and other means of protecting sensitive data.

This enlarged realm of protection reaches not only the information directly related to military projects - where the need for secrecy is quite understandable but in addition affects the flow of information which is only marginally related to the defense sector, e.g. the results of research associated with advanced computer systems.

VIII. Economic Interests

These also tend to give rise to protective measures and secrecy. In the case of large transnational firms - which incidentally account for at least one-third of the global financial resources or R&D. Most of the information which originates in the firms research and development is naturally considered an economic asset and therefore not publicly disclosed. In the case of countries where most economic activities are controlled by the state, constraints on the flow of information arisen primarily on account of the strategic which nearly all economic activities occupy in the defense systems of these state.

IX. Cultural

A number of issues would appear to derive from basic differences in cultural contexts. Two of these merit special attention here: difference in language and in the basic modes and priorities of research. On the one hand, language barriers and the fact that an exceedingly small number of languages (e.g. English) tend to dominate scientific and technical communication will frequently present greater difficulties for information users in Africa. Even if the colonial heritage of many African countries have introduced one of the major languages for scientific communication to a comparatively small segment of the population, the indigenous languages of the vast majority of users in these countries are nevertheless different, and widespread command of a second language does seldom exist. Simultaneously, the resources available for professional interpreation and translation will also frequently be insufficient to make up for this gap.

On the other hand, it has become increasingly clear that the way in which scientific research and development is conducted in the Western industrialized countries and the priorities which are set for research and development in this cultural context may be alienating for many African countries. For this reason the information generated in industrialized countries and becoming available through international channels may only be indirectly relevant for solutions to the problems facing users in African countries. Given a difference in educational standards, the information accessible through international information flows can also be difficult to utilize in Africa. A lack of priorities in research concerning the

scientific and technological issues which are vital to the African countries (e.g. diarrhoea), and consequently a relative lack of information on these issues in international networks, will be sensed as a direct difficult issue in the usefulness of international flows of information too.

Concluding remarks

The ultimate reason for analysing issues in relation to information dissemination for development planning, is to develop a framework for action. For example, there obviously exist an option for subsidizing the flow of information to African countries in various ways, i.e., overcoming the financial constraints. One possibility is to reduce the costs of publications, either by direct subsidy of purchases made by institutions in Africa. Another possibility is for the industrialized countries to provide preferential access to data-bases and/or the telecommunications linkages involved in conducting on-line search from the African countries.

Another sphere of action might tackle technical problems such as for instance, providing new information technology to African countries or betterstill enhancing the indigenous capability to produce and utilize these technologies. Such action may involve the development of new software packages, or international attempts to standardize systems so that the problem of compatibility is minimized. For Africa, information systems like the Pan-African Documentation and Information System (PADIS), should be given more support by the African countries, so that this system can be strengthened to effectively serve the African member States. African countries should put more financial resources into the development of both regional and sectoral information systems so that the problem of reliance on external information systems is minimized.

An extremely important conclusion which the analysis of issues suggests is that the factors affecting information flow in Africa are highly complex and covers a wide range of issues. Therefore, the action to be undertaken in order to alleviate the disadvantaged situation of people in Africa should ideally be systematic and consistent. Merely dealing with one element of this highly complex process - or undertaking action in an ad-hoc manner is not likely to produce much result. What is needed is an agenda of concerted action which includes actors at both national, regional and international levels and which deals with more than one dimension of information flow.